



## **CIGARETTE INFORMATION REPORT PHILIP MORRIS USA RESEARCH AND DEVELOPMENT**



**JANUARY 1990**

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RICHMOND, VIRGINIA

C.I. REPORT

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## SALES WEIGHTED AVERAGES OF TAR, NICOTINE AND CO

## BRAND TRENDS

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**ALPHABETICAL INDEX OF BRANDS**

BRAND	SIZE	PAGE NO.*	COMPANY**	BRAND	SIZE	PAGE NO.*	COMPANY**
Alpine	K-FM	52	PM	English Ovals (Box)	K-NF	64	PM
Alpine Lights	K-FM	51	PM	Eve Slim Lights (Box)	100	62	LG
Alpine Lights	100M	58	PM	Eve Slim Lts. Men. (Box)	100M	64	LG
Alpine	100M	59	PM	Eve Lights (Box)	120	62	LG
American Filters	K-F	49	A	Eve Lights Men. (Box)	120M	64	LG
American Filters	100	56	A	Hi-Lite (Box)	100	62	PM
American Lights	K-F	48	A	H. Tareyton	K-NF	64	A
American Lights	100	55	A	Kent (Box)	L-F	44	LG
Barclay	K-F	9	BW	Kent	K-F	12	LG
Barclay (Box)	L-F	62	BW	Kent III	K-F	8	LG
Barclay	100	24	BW	Kent	100	28	LG
Belair	K-FM	20	BW	Kent Men.	100M	64	LG
Belair	100M	34	BW	Kent III	100	23	LG
Benson & Hedges (Box)	K-F	62	PM	Kent III (Box)	100	62	LG
Benson & Hedges	100	38	PM	Kent Golden Lts. (Box)	L-F	62	LG
Benson & Hedges Men.	100M	38	PM	Kent Golden Lts.	K-F	10	LG
Benson & Hedges (Box)	100	62	PM	Kent Golden Lts. Men.	K-FM	18	LG
Benson & Hedges Men. (Box)	100M	64	PM	Kent Golden Lts.	100	23	LG
Benson & Hedges Lights	100	28	PM	Kent Golden Lts. Men.	100M	38	LG
Benson & Hedges Lights Men.	100M	36	PM	Kent Golden Lts. (Box)	100	62	LG
Benson & Hedges Lights (Box)	100	27	PM	Kool	R-NFM	64	BW
Benson & Hedges Lts. Men. (Box)	100M	36	PM	Kool (Box)	L-FM	64	BW
B & H Deluxe U.L. (Box)	100	24	PM	Kool	K-FM	21	BW
B & H Deluxe U.L. Men. (Box)	100M	33	PM	Kool Lights	K-FM	18	BW
B & H Multifilter	K-PC	42	PM	Kool Milds	K-FM	20	BW
Cambridge Full Flavor	KF	50	PM	Kool Milds (Box)	L-FM	20	BW
Cambridge Full Flavor	100	57	PM	Kool Ultra	K-FM	17	BW
Cambridge Ultra Lights	100	53	PM	Kool	100M	38	BW
Cambridge Lights	K-F	48	PM	Kool Lights	100M	34	BW
Cambridge Lights Men.	K-FM	51	PM	Kool Milds	100M	64	BW
Cambridge Lights	100	58	PM	Kool Ultra	100M	33	BW
Cambridge Lights Men.	100M	58	PM	Lark	K-PC	62	LG
Camel (Box)	L-F	62	R	Lark	100C	62	LG
Camel	R-NF	45	R	Lark Lights	K-PC	42	LG
Camel	K-F	14	R	Lark Lights	100C	43	LG
Camel Lights (Box)	L-F	44	R	L & M (Box)	L-F	62	LG
Camel Lights	K-F	12	R	L & M	K-F	13	LG
Camel Lights	100	26	R	L & M	100	29	LG
Capri (Box)	100	40	BW	Lucky Strike	R-NF	48	A
Capri Men. (Box)	100M	41	BW	Lucky Strike	K-F	13	A
Ultra Carlton (Box)	K-F	62	A	Lucky Strike (Box)	K-F	62	A
Carlton	K-F	8	A	Lucky Strike Lights	K-F	62	A
Carlton Men.	K-FM	16	A	Lucky Strike	100	62	A
Carlton	100	22	A	Lucky Strike	100M	64	A
Carlton (Box)	100	22	A	Lucky Strike Men.	100	62	A
Carlton Men.	100M	64	A	Lucky Strike Lights	100	62	A
Carlton Men. (Box)	100M	64	A	Magna (Box)	L-F	48	R
Carlton	120	31	A	Magna	K-F	46	R
Carlton Men.	120M	39	A	Magna Lites (Box)	L-F	46	R
Century 25's	K-F	49	R	Magna Lites	K-F	47	R
Century Lights 25's	K-F	46	R	Malibu	K-F	49	A
Century 25's	100	37	R	Malibu	KFM	52	A
Century Lights 25's	100	54	R	Malibu	100	56	A
Chesterfield	R-NF	64	LG	Malibu Low Tar Men.	100M	59	A
Chesterfield King	K-NF	65	LG	Malibu Lights	K-F	46	A
Chesterfield Lights	K-F	47	LG	Malibu Lights	100	54	A
Chesterfield Lights	100	54	LG	Malibu Ultra Lights	100	53	A
Commander King Size	K-NF	48	PM	Marlboro (Box)	L-F	44	PM
Commander Regular	K-NF	48	PM	Marlboro	K-F	19	PM
Doral Full Flavor (Box)	L-F	48	R	Marlboro 25's	K-F	18	PM
Doral Full Flavor	K-F	49	R	Marlboro Lights	K-F	12	PM
Doral Full Flavor Men.	KFM	52	R	Marlboro Lights 25's	K-F	11	PM
Doral Full Flavor	100	56	R	Marlboro Lights (Box)	K-F	11	PM
Doral Full Flavor Monchel	100M	59	R	Marlboro Lights	100	28	PM
Doral Lights	K-F	46	R	Marlboro Lights (Box)	100	27	PM
Doral Lights Men.	K-FM	51	R	Marlboro Lts. Men. (Box)	K-FM	19	PM
Doral Lights	100	54	R	Marlboro Lts. Men. (Box)	100M	36	PM
Doral Lights Men.	100M	58	R	Marlboro Men.	K-FM	21	PM
Doral Ultra Lights	K-F	46	R	Marlboro	100	30	PM
Doral Ultra Lights	100	52	R	Marlboro (Box)	100	62	PM
				Max	120	62	LG
				Max Men.	120M	64	LG

\*Location of complete analytical data in report.

\*\*Key: A = American; BW = Brown & Williamson; LG = Liggett Group; LO = Lorillard  
PM = Philip Morris; R = Reynolds

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ECONOMIC STATE OF RUSSIA (cont.)

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PHOTOGRAPH BY PHILIP MORRIS, R. B. REYNOLDS

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C.I. HIGHLIGHTS

JANUARY 1990

NEW BRANDSPHILIP MORRIS  
BRISTOL LIGHTS 85 & 100 (PLAIN & MENTHOL)

Philip Morris has introduced Bristol Lights 85 and 100 (plain and menthol) cigarettes into limited national distribution. These cigarettes will be sold in 42 areas where the subgeneric market for cigarettes appears to be developing. The 85 mm cigarettes deliver 11 mg tar and 0.8 mg nicotine; the 100 mm cigarettes deliver 12 mg tar and 0.9 mg nicotine. The smoke menthol delivery is 0.6 mg.

PHILIP MORRIS  
BUCKS FULL FLAVOR 85  
BUCKS LIGHTS 85

Philip Morris is test marketing Bucks Full Flavor 85 and Bucks Lights 85 cigarettes in Phoenix, Arizona and Birmingham, Alabama. These cigarettes are targeted to compete against Camel cigarettes. The Bucks 85 cigarette delivers 14 mg tar and 1 mg nicotine; the Bucks Lights 85 cigarette delivers 10 mg tar and 0.7 mg nicotine.

R. J. REYNOLDS  
UPTOWN 80 MENTHOL (BOX)  
UPTOWN 85 MENTHOL (SOFT)

R. J. Reynolds introduced but then withdrew Uptown 80 Menthol (Box) and Uptown 85 Menthol (Soft Pack) cigarettes from the Philadelphia test market. These cigarettes are packaged in a black and gold pack. The cigarettes are intentionally packaged with the filter-end toward the bottom of the pack. This supposedly enables the smoker to put the cigarette in his mouth without touching the filter. These cigarettes deliver 17 mg tar, 1.2 mg nicotine and 0.53 mg smoke menthol.

BRAND MODIFICATIONSR. J. REYNOLDS  
DORAL LIGHTS MENTHOL 85 & 100

The level of expanded tobacco has decreased (25 to 20%) in both Doral Lights Menthol 85 and 100 cigarettes resulting in increased tobacco weights and rod densities. In May, 1988, the level of expanded tobacco was decreased from 32 to 25%.

R. J. REYNOLDS  
TOBACCO WEIGHT REDUCTIONS

Thirteen additional brands have shown a tobacco weight reduction (2 to 8%) since July, 1989. Previously, tobacco weights had been lowered on twenty-one brands. Reynolds has decreased tobacco weight on a total of 34 brands.

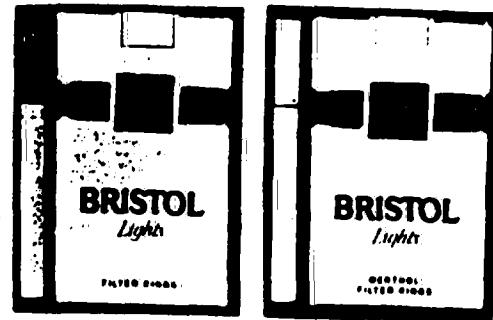
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## NEW BRANDS

PHILIP MORRIS  
BRISTOL LIGHTS 85 (PLAIN & MENTHOL)

Philip Morris has introduced Bristol Lights 85 (plain and menthol) cigarettes into limited national distribution. The smoke deliveries of these brands are lower than the Pyramid cigarettes.



	Bristol Lights 85	Pyramid Lights 85	Bristol Lights Menthол 85
<u>Smoke</u>			
Butt Length, mm	35	33	35
FTC Tar, mg/cigrt.	10.9	14.0	11.4
Nicotine, mg/cigrt.	0.82	1.07	0.87
Puffs/cigrt.	7.8	7.8	7.7
Filtration Eff., %	55	48	51
Filler Rod TPM, mg/cigrt.	32.9	28.8	35.5
CO, mg/cigrt.	12.4	12.8	12.1
<u>Cigarette</u>			
Total RTD, mm of $\text{H}_2\text{O}$	119	117	111
Static Burn. Time, min.	7.9	7.9	8.1
Length, mm	84.0	83.8	84.1
Circumference, mm	24.9	24.7	24.9
<u>Paper</u>			
Components			
Type	Cit.	Cit.	Cit.
Percent	0.7	0.5	0.6
Permeability, ml/cm <sup>2</sup> x min.	20	143*	18
<u>Filter</u>			
Type	CA	CA	CA
RTD, mm of $\text{H}_2\text{O}$	104	63	97
Length, mm	26.9	24.8	27.1
Weight, g	0.17	0.14	0.17
Fiber denier/shape	3.2/Y	4.4/Y	3.2/Y
Tipping paper length, mm/Color	32/Cork	30/Cork	32/White
Ventilation, %	19	None	22
Type/Rows	L/2	-	L/2
<u>Tobacco</u>			
Total alkaloids, % (DWB)	2.32	2.10	2.39
Total red. sugars, % (DWB)	7.2	8.4	6.6
Wt. of tob., g (12.5% O.V.)	0.614	0.629	0.611
Rod Density, g/cc	0.219	0.220	0.218
Reconstituted Tob., %	15	15	15
Expanded Stems, %	15	5	15
Expanded Tob., %	None	23	None
<u>Menthol, mg/cigarette</u>			
Smoke	-	-	0.63
Filler	-	-	2.4
Filter	-	-	1.2

\*Perforated

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**PHILIP MORRIS****BRISTOL LIGHTS 100 (PLAIN & MENTHOL)**

Philip Morris has introduced Bristol Lights Menthol 85 and 100 cigarettes into limited national distribution. The tar and nicotine deliveries for these cigarettes are lower than the Pyramid cigarettes.



	Bristol Lights 100	Pyramid Lights 100	Bristol Lights Menthол 100	Pyramid Lights Menthол 100
<b>SMOKE</b>				
Butt Length, mm	39	38	39	38
FTC Tar, mg/cigrt.	12.0	13.4	12.5	14.1
Nicotine, mg/cigrt.	0.94	1.04	0.93	1.07
Puffs/cigrt.	10.2	8.3	10.0	8.3
Filtration Eff., %	54	52	54	50
Filler Rod TPM, mg/cigrt.	34.7	28.3	35.9	28.1
CO, mg/cigrt.	12.5	14.4	14.0	14.2
<b>CIGARETTE</b>				
Total R.R., mm of $\text{H}_2\text{O}$	115	131	123	125
Static Burn. Time, min.	8.1	7.3	7.8	6.7
Length, mm	99.6	98.6	99.7	98.1
Circumference, mm	24.7	24.8	24.9	24.7
<b>PAPER</b>				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.6	0.9	0.7	2.0
Permeability, ml/cm <sup>2</sup> x min.	21	77*	19	124*
<b>FILTER</b>				
Type	CA	CA	CA	CA
R.R., mm of $\text{H}_2\text{O}$	100	65	111	69
Length, mm	31.4	29.9	31.4	29.6
Weight, g	0.19	0.17	0.19	0.17
Fiber density/shape	3.2/Y	4.4/Y	3.2/Y	4.4/Y
Tipping paper length, mm	36	35	36	35
Color	Cork	Cork	White	White
Ventilation, %	30	None	28	None
Type/Rows	L/2	-	L/2	-
<b>EXTRACT</b>				
Total alkaloids, % (DMS)	2.38	2.17	2.34	2.05
Total red. sugars, % (DMS)	7.5	8.7	6.4	8.5
Wt. of tob., g (12.5% O.V.)	0.774	0.733	0.766	0.724
Red Density, g/cc	0.234	0.219	0.228	0.218
Reconstituted Tob., %	15	15	15	15
E.S., %	15	5	15	5
Expanded Tob., %	None	23	None	23
<b>MENTHOL, MG/CTGRT.</b>				
Smoke	-	-	0.64	0.42
Filler	-	-	3.3	2.0
Filter	-	-	1.2	1.1

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**PHILIP MORRIS**  
**BUCKS FULL FLAVOR 85**  
**BUCKS LIGHTS 85**

Philip Morris is test marketing Bucks Full Flavor 85 and Bucks Lights 85 cigarettes in Phoenix, Arizona and Birmingham, Alabama. These cigarettes are targeted to compete against Camel and Camel Lights cigarettes.



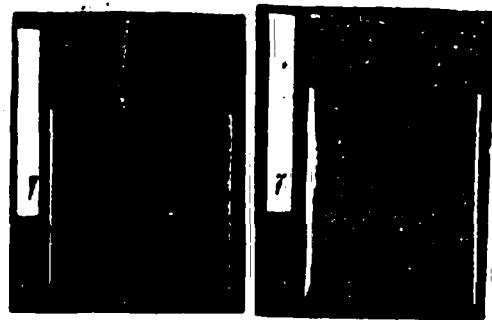
	<b>Bucks Full Flavor 85</b>	<b>Bucks Lights 85</b>	<b>Camel Lights 85</b>
<b>SMOKING</b>			
Butt Length, mm	28	28	34
FTC Tar, mg/cig.	14.4	14.2	10.9
Nicotine, mg/cig.	0.98	0.94	0.76
Puffs/cig.	8.4	8.1	7.6
Filtration Eff., %	46	46	60
Filler Rod TPM, mg/cig.	31.2	28.1	29.3
CO, mg/cig.	12.9	13.1	10.4
<b>CIGARETTE</b>			
Total RTD, mm of $\text{H}_2\text{O}$	108	106	120
Static Burn. Time, min.	7.7	7.0	7.7
Length, mm	84.2	83.9	84.6
Circumference, mm	25.0	25.0	24.9
<b>PAPER</b>			
Components			
Type	Cit.	Cit.	Cit.
Percent	0.9	0.9	0.8
Permeability, ml/cm <sup>2</sup> x min.	31	39	31
<b>FILTER</b>			
Type	CA	CA	CA
RTD, mm of $\text{H}_2\text{O}$	74	68	103
Length, mm	20.9	21.1	26.9
Weight, g	0.13	0.13	0.17
Fiber diameter/shape	3.2/Y	3.0/Y	3.2/Y
Tipping paper length, mm/Color	25/Cork	25/Cork	31/Cork
Ventilation, %	9	12	16
Type/Rows of Holes	L/1	ESP	L/1
<b>TOBACCO</b>			
Total alkaloids, % (DMB)	2.12	1.84	2.08
Total red. sugars, % (DMB)	7.7	6.6	8.1
Wt. of tab., g (12.5% O.V.)	0.704	0.710	0.638
Red Density, g/cc	0.224	0.226	0.228
Reconstituted Tab., %	22	24	22
S.S., %	7	None	7
Expanded Tab., %	14	16	14

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R. J. REYNOLDS  
UPTOWN 80 MENTHOL (BOX)  
UPTOWN 85 MENTHOL (SP)

R. J. Reynolds introduced but then withdrew Uptown 80 Menthol (Box) and Uptown 85 Menthol (SP) cigarettes from the Philadelphia test market.



	<u>Uptown Menthol 80 (Box)</u>	<u>Uptown Menthol 85 (SP)</u>	<u>Marlboro Menthол 85</u>
<u>SMOKE</u>			
Butt Length, mm	26	28	28
FTC Tar, mg/cig.	17.1	17.5	15.5
Nicotine, mg/cig.	1.22	1.21	1.08
Puffs/cig.	8.7	8.7	8.4
Filtration Eff., %	42	45	43
Filler Rod TPM, mg/cig.	32.0	31.2	26.5
CO, mg/cig.	16.2	16.9	13.4
<u>CIGARETTE</u>			
Total RTD, mm of $\text{H}_2\text{O}$	139	136	113
Static Burn, Time, min.	8.6	8.5	7.4
Length, mm	78.8	83.9	83.5
Circumference, mm	24.7	24.9	24.9
<u>PAPER</u>			
Permeability, ml/cm <sup>2</sup> x min.	24	23	47
<u>FILTER</u>			
Type	CA	CA	CA
RTD, mm of $\text{H}_2\text{O}$	61	68	63
Length, mm	18.9	20.8	21.0
Weight, g	0.11	0.12	0.12
Fiber denier/shape	3.6/Y	3.6/Y	4.1/Y
Tipping paper length, mm/Color	23/Cork	25/Cork	25/Cork
Ventilation, %	None	None	None
<u>TOBACCO</u>			
Total alkaloids, % (DWB)	2.35	2.23	2.14
Total red. sugars, % (DWB)	6.8	8.1	8.4
Wt. of tob., g (12.5% O.V.)	0.724	0.741	0.726
Red Density, g/cc	0.249	0.239	0.235
Reconstituted Tob., %	24	24	22
E.S., %	None	None	None
Expanded Tob., %	16	16	15
<u>MENTHOL, MG/CTGR.</u>			
Smoke	0.57	0.53	0.56
Filler	1.9	2.0	2.0
Filter	0.5	0.5	1.2

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BRAND MODIFICATIONSBLU RIBBON  
DORAL LIGHTS MENTHOL 85 & 100

The level of expanded tobacco has decreased in both Doral Lights Menthol 85 and 100 cigarettes resulting in increased tobacco weights and rod densities.

	<u>Doral Lights</u> <u>Menthol 85</u>		<u>Doral Lights</u> <u>Menthol 100</u>	
	<u>Previous</u>	<u>Present</u>	<u>Previous</u>	<u>Present</u>
<u>Smokes</u>				
Butt Length, mm	34	34	38	38
FTC Tax, mg/cigrt.	9.7	9.5	9.6	9.3
Nicotine, mg/cigrt.	0.69	0.68	0.70	0.69
Puffs/cigrt.	7.5	7.4	9.2	9.0
<u>Filters</u>				
wt. of tob., g (12.9% OV)	0.557	0.606	0.696	0.738
Rod Density, g/cc	0.203	0.214	0.204	0.217
Reconstituted Tob., g	24	24	24	24
E.S., g	None	None	None	None
Expanded Tobacco, g	25	20	25	20

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R. J. REYNOLDS  
SUMMARY OF TOBACCO WEIGHT CHANGES

Thirteen additional brands have shown a tobacco weight reduction (2 to 8%) since July, 1989. Previously, R. J. Reynolds had lowered tobacco weights on twenty-one brands.

Brand	Tobacco Weight, g/cigt. (12.9% OV)			Rod Density, g/cc		
	Previous	Present	% Change	Previous	Present	% Change
Camel 70 (NR)	0.798	0.772	(-3)	0.233	0.224	(-4)
Camel Lights 80 (Box)	0.674	0.650	(-3)	0.227	0.217	(-4)
More Lights Men. 100 (Box)	0.678	0.639	(-6)	0.247	0.232	(-6)
Now 85 Menthol	0.487	0.470	(-4)	0.173	0.165	(-5)
Now 100 Menthol	0.584	0.572	(-2)	0.173	0.168	(-3)
Ritz 100 (Box)	0.758	0.694	(-8)	0.244	0.222	(-9)
Ritz Menthol 100 (Box)	0.772	0.732	(-5)	0.248	0.233	(-6)
Salem Ultra Lights 100	0.789	0.769	(-3)	0.234	0.228	(-3)
Vantage Menthol 85	0.714	0.679	(-4)	0.244	0.230	(-5)
Vantage Ultra Lights 85	0.610	0.595	(-3)	0.218	0.210	(-3)
Vantage Ultra Lights 100	0.729	0.709	(-3)	0.216	0.209	(-3)
Winstea Ultra Lights 85	0.601	0.574	(-5)	0.212	0.202	(-4)
Winstea Ultra Lights 100	0.724	0.696	(-4)	0.214	0.206	(-3)

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ANNUAL RECONSTITUTED TOBACCO,  
EXPANDED TOBACCO AND EXPANDED STEM SURVEY

Philip Morris and competitive brands were examined for their reconstituted tobacco, expanded tobacco and expanded stems.

The reconstituted tobacco of each manufacturer was microscopically examined to determine the composition and process by which each was made. Brown & Williamson was the only manufacturer that made a change in their reconstituted tobacco since these materials were examined in 1988.

Brown & Williamson uses three types of reconstituted tobacco. Two are made by the papermaking process. Brown & Williamson is again using an "RCB type" sheet. This sheet material is being used in their Viceroy 85 and 100 cigarettes. The "RCB type" sheet contains diamonium phosphate and is similar in every way to Philip Morris' RCB sheet material.

Philip Morris and Brown & Williamson are the only companies that use a two-toned cast sheet in their products (RCB). Brown & Williamson, Liggett Group and Lorillard use softwood fibers as well as tobacco leaf and stem in their reconstituted sheet material.

R. J. Reynolds and Lorillard are the only major tobacco manufacturers not using expanded stems in any of their cigarette blends.

Brown & Williamson is the only manufacturer that does not use expanded tobacco in all of their blends. The blends of Viceroy Lights 85 and 100, Raleigh Lights 85 and 100, Capri 100 (plain and menthol), Richland 100 and Richland Lights 85 and 100 do not contain expanded tobacco. Freen® is still detected in the filler of Reynolds, Lorillard, American and Liggett products.

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The following blend changes were made during 1989:

U.S. MANUFACTURERS

	<u>Vantage 85</u>		<u>Doral Lights Men. 85</u>	
	<u>Previous</u>	<u>Present</u>	<u>Previous</u>	<u>Present</u>
Expanded Tobacco, %	16	20	25	20
<u>Doral Lights Men. 100</u>				
	<u>Previous</u>		<u>Present</u>	
Expanded Tobacco, %	25	20		
<u>SECOND &amp; FOURTH QUARTER</u>				
	<u>Viceroy 85</u>		<u>Viceroy 100</u>	
	<u>Previous</u>	<u>Present</u>	<u>Previous</u>	<u>Present</u>
Expanded Stems, %	13	7	13	7

A complete listing showing the levels of the various blend components of brands by manufacturer is given on pages 60 and 61.

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CIGARETTES ON MARKET WITH  
TAR AND NICOTINE DATA LISTED ON PACK

	Tax, mg/cigarette			Nicotine, mg/cigarette		
	Listed On Package	FTC Data <sup>1</sup>	CI Data	Listed On Package	FTC Data <sup>1</sup>	CI Data
<b>AMERICAN</b>						
Ultra Carlton 85 (Box)	0.01	*	0.00	0.002	*	0.00
Carlton Menthol 85	1	1	2	0.1	0.1	0.1
Carlton 100 (Box)	1	1	2	0.1	0.1	0.2
Carlton 100 Menthol (Box)	1	1	1	0.1	0.1	0.1
Carlton 85	1	1	2	0.1	0.1	0.2
Carlton Menthol 100	3	4	5	0.3	0.4	0.4
Carlton 100	3	3	4	0.3	0.3	0.3
Carlton Menthol 120	6	6	6	0.6	0.6	0.5
Carlton 120	6	6	6	0.6	0.6	0.5
Lucky Strike Lights 85	8	8	8	**	0.6	0.7
Lucky Strike Lights 100	9	9	10	**	0.8	0.8
Tareyton Lights 85	5	5	6	**	0.4	0.4
<b>LORILLARD</b>						
Triumph Menthol 85	2	4	4	0.3	0.4	0.4
Triumph 85	3	4	4	0.4	0.4	0.3
Triumph 100	4	5	6	0.5	0.5	0.5
Triumph Menthol 100	4	6	6	0.5	0.6	0.5
<b>PHILIP MORRIS</b>						
B&H DeLuxe Ultra Lts. 100 (Box)	6	6	6	0.6	0.5	0.5
B&H DeLuxe Ultra Lts.						
Menthol 100 (Box)	6	5	6	0.6	0.5	0.4
Cambridge Ultra Lts. 100	5	5	5	**	0.4	0.4
Merit Ultra Lights 85	5	5	5	0.5	0.5	0.4
Merit Ultra Lights 85 (Box)	5	**	5	0.5	**	0.4
Merit Ultra Lights Men. 85	5	5	6	0.5	0.5	0.5
Merit Ultra Lights 100	6	6	6	0.6	0.4	0.5
Merit Ultra Lights 100 (Box)	6	**	6	0.6	**	0.6
Merit Ultra Lights Men. 100	6	5	6	0.6	0.5	0.5
Merit 85	8	8	8	0.6	0.6	0.6
Merit 85 (Box)	8	8	8	0.6	0.6	0.6
Merit Menthol 85	8	8	8	0.6	0.6	0.7
Merit 100	10	10	10	0.8	0.8	0.8
Merit Menthol 100	10	10	9	0.8	0.8	0.8
<b>REYNOLDS</b>						
Now 80 (Box)	<0.5	*	0.00	**	*	0.00
Now 85	1	1	2	**	0.1	0.1
Now Menthol 85	1	1	2	**	0.1	0.1
Now 100	2	2	2	**	0.2	0.2
Now Menthol 100	2	3	3	**	0.3	0.3
<b>BROWN &amp; WILLIAMS</b>						
Barclay 80 (Box)	3	-	-	**	-	-
Barclay 85	3	-	-	**	-	-
Barclay 100	5	-	-	**	-	-

<sup>1</sup>FTC data published December, 1988.

\*Less than 0.5 mg tar and 0.05 mg nicotine.

\*\*Not Listed.

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**CIGARETTE BRANDS RANKED ACCORDING TO SIZE AND SALES<sup>1</sup>**  
**PHILIP MORRIS DATA**

<b>100 MM FILTER PLAIN</b>			<b>100 MM FILTER NICOTINE</b>			<b>100 MM FILTER PLAIN</b>			<b>100 MM FILTER NICOTINE</b>		
	<b>SALES</b>	<b>PTC TAR, MG/CIGAR.</b>		<b>SALES</b>	<b>PTC TAR, MG/CIGAR.</b>		<b>SALES</b>		<b>PTC TAR, MG/CIGAR.</b>	<b>NICOTINE, MG/CIGAR.</b>	
More	1.45	17.3	1.24	Salem Lights	4.36	8.2	0.69				
VA SLIM LIGHTS (BOX)	1.22	13.2	1.02	Salem	3.39	13.3	1.10				
SARATOGA (BOX)	0.84	14.9	1.17	Kest	3.35	16.0	1.21				
Carlton	0.43	8.9	0.51	<b>DEMOCRATIC HEDGES MEN.</b>	3.36	15.7	1.16				
<b>100 MM FILTER NICOTINE</b>				Newport	2.22	17.3	1.26				
More Men.	1.25	17.0	1.27	Doral Lights Men.	1.81	9.3	0.69				
VA SLIM LIGHTS MEN. (BOX)	0.91	13.6	1.03	Salem Ultra Lights	1.76	9.4	0.42				
Carlton Men.	0.42	8.6	0.34	<b>R. J. R. DELUXE ULTRA-LITES (BOX)</b>	1.72	5.5	0.43				
SARATOGA MEN. (BOX)	0.28	14.7	1.11	<b>R. J. R. LIGHTS MEN.</b>	1.67	10.4	0.83				
<b>100 MM FILTER PLAIN</b>				<b>CAMBRIDGE LIGHTS MEN.</b>	1.09	11.0	0.89				
MARLBORO LIGHTS	7.30	11.2	0.89	New Men.	0.99	3.3	0.26				
MARLBORO	6.48	16.5	1.19	Bolair	0.69	8.3	0.63				
Winston	8.02	16.1	0.98	<b>ALPINE LIGHTS</b>	0.69	10.0	0.78				
Winston Lights	4.40	18.6	0.76	Malibu (Low Tar) Menthol	0.63	11.4	0.93				
MARLBORO LIGHTS (BOX)	3.76	11.6	0.88	<b>ALPINE</b>	0.39	13.3	1.08				
DEMOCRATIC HEDGES	3.09	13.7	1.15	True Men.	0.49	8.6	0.73				
Doral Lights	2.99	11.4	0.91	<b>MERIT MEN.</b>	0.49	9.2	0.70				
MERIT	2.79	10.0	0.81	<b>MERIT ULTRA LIGHTS MEN.</b>	0.47	5.4	0.49				
R. J. R. DELUXE ULTRA-LITES (BOX)	2.42	6.1	0.49	Doral Full Flavor Men.	0.44	13.4	1.11				
Carlton	2.02	3.7	0.32	Kool Lights	0.41	8.6	0.75				
Vantage	1.99	9.0	0.66	<b>MARLBORO LIGHTS MEN. (BOX)</b>	0.40	9.7	0.70				
CAMBRIDGE LIGHTS	1.94	12.1	0.91	Pyramid Lights	0.32	14.1	1.07				
R. J. R. LIGHTS	1.89	11.1	0.88	Reel Ultra 100's	0.29	•	•				
MERIT ULTRA LIGHTS	1.88	9.8	0.51	Newport Lights	0.23	8.9	0.68				
Doral Full Flavor	1.89	14.9	1.00	Vantage Men.	0.21	8.9	0.68				
New	1.77	2.1	0.20	<b>PLAYERS LIGHTS MEN. 25's</b>	0.20	11.4	0.90				
Pall Mall	1.71	16.6	1.21	<b>R. J. R. LIGHTS MEN. (BOX)</b>	0.19	10.4	0.78				
Vantage Ultra Lights	1.69	5.7	0.46	Ritz (Box)	0.10	11.1	0.81				
CAMBRIDGE ULTRA LIGHTS	1.33	4.9	0.42	Kent Golden Lights Men.	0.10	9.2	0.82				
Kent	1.32	12.7	0.93	Satin Men.	0.08	10.8	0.92				
CAMBRIDGE FULL FLAVOR	1.26	16.0	1.10	Savvy Lights	0.09	10.2	0.90				
Winston Ultra Lights	1.25	8.3	0.42	<b>100 MM FILTER SLIM</b>							
Viceroy	1.17	17.9	1.30	<b>VA SLIM LIGHTS</b>	1.95	14.0	1.02				
Kent 25's	1.12	8.8	0.47	<b>VA SLIM LIGHTS (BOX)</b>	1.82	8.3	0.70				
Carlton (Box)	1.02	8.8	0.13	<b>VA SLIM SLIM (BOX)</b>	1.65	6.0	0.49				
Camel Lights	0.97	10.6	0.78	Capri (Box)	1.00	9.3	0.76				
Century Lights 25's	0.91	11.3	0.88	More Lights (Box)	0.21	10.1	0.76				
True	0.90	7.9	0.76	<b>100 MM FILTER SLIM NICOTINE</b>							
Kent Golden Lights	0.88	9.0	0.79	<b>VA SLIM LIGHTS MEN. (BOX)</b>	2.02	8.9	0.72				
Malibu Lights	0.84	9.1	0.76	Salem Slim Lights (Box)	1.69	8.9	0.69				
Doral Ultra Lights	0.80	8.3	0.48	<b>VA SLIM SLIM MEN.</b>	1.62	14.4	1.04				
Richland 25's	0.78	16.3	1.23	<b>VA SLIM SLIM MEN. (BOX)</b>	0.90	5.6	0.46				
Raleigh	0.74	14.3	0.92	Capri Men (Box)	0.87	8.9	0.71				
Century 25's	0.65	15.0	1.03	More Lights Men. (Box)	0.18	9.0	0.66				
Century Lights 25's	0.61	11.9	0.88								
American Lights	0.58	11.6	0.91								
Viceroy Lights	0.55	12.6	0.96								
Richland Lights 25's	0.47	12.5	0.93								
Malibu	0.43	15.1	1.23								
PLAYERS LIGHTS 25's	0.33	11.7	0.90								
MERIT ULTRA LIGHTS (BOX)	0.32	6.2	0.56								
Winston Lights (Box)	0.32	16.4	0.72								
Pyramid Ultra Lights	0.32	9.9	0.92								
Pyramid Lights	0.32	13.4	1.04								
Barclay	0.28	•	•								
Raleigh Lights	0.21	12.8	0.96								
<b>R. J. R. LIGHTS (BOX)</b>	0.21	16.7	0.88								
L & M	0.20	12.8	1.00								
American Filters	0.20	15.4	1.14								
Satin	0.13	10.8	0.88								
Ritz (Box)	0.07	9.3	0.78								
Savvy Lights	0.05	10.2	0.89								
Chesterfield Lights	0.05	10.1	0.84								
Savvy Ultra Lights	0.03	8.8	0.87								
Malibu Ultra Lights	-	6.2	0.49								

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1969.

\*See page XII.

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CIGARETTE BRANDS RANKED ACCORDING TO SIZE AND SALES<sup>1</sup>  
PHILIP MORRIS DATA

<u>100 MM FILTER CHARCOAL</u>		<u>PTC TAR, NICOTINE,</u>		<u>100 MM FILTER METAL</u>		<u>PTC TAR, NICOTINE,</u>	
	SALES	MG/CIGEL	MG/CIGEL		SALES	MG/CIGEL	MG/CIGEL
<u>PARLIAMENT LIGHTS</u>	1.37	11.7	0.99	Kool	9.64	15.7	1.12
Tareyton	1.17	13.1	0.95	Newport	6.21	16.3	1.18
Lark Lights	0.18	12.3	0.98	Salem Lights	5.64	9.3	0.69
Tareyton Long Lights	0.15	8.1	0.69	Salem	5.41	15.7	1.13
<u>85 MM FILTER CHARCOAL</u>				Kool Milds	2.77	11.8	0.93
Tareyton	1.28	12.9	0.90	Salem Ultra Lights	1.22	9.5	0.43
Lark Lights	0.24	11.7	0.91	Doral Lights Men.	0.96	9.5	0.60
<u>85 MM MULTIFILTER</u>	0.13	11.5	0.87	<u>MARLBORO MEN</u>	0.93	15.8	1.08
Tareyton Lights	0.07	8.8	0.43	Belair	0.84	10.8	0.79
<u>85 MM FILTER PLAIN</u>				Newport Lights	0.82	8.9	0.73
<u>MARLBORO</u>	20.94	18.9	1.13	Vantage Men.	0.68	9.3	0.64
<u>MARLBORO LIGHTS</u>	15.66	10.9	0.83	<u>MERIT MEN</u>	0.56	8.0	0.68
Winston	14.14	13.1	1.05	<u>ALPINE</u>	0.53	15.1	1.02
<u>MARLBORO LIGHTS (BOX)</u>	11.96	10.8	0.79	True Men.	0.52	5.0	0.44
Winston Lights	6.81	9.3	0.65	<u>ALPINE LIGHTS</u>	0.52	9.4	0.72
Vantage	3.77	8.2	0.58	<u>MERIT ULTRA LIGHTS MEN</u>	0.52	5.9	0.50
Merit	3.61	7.6	0.62	<u>MARLBORO LIGHTS MEN (BOX)</u>	0.51	9.7	0.77
Camel	3.55	14.2	0.94	Kool Lights	0.48	7.7	0.68
Camel Lights	3.45	10.9	0.76	<u>CAMBRIDGE LIGHTS MEN</u>	0.48	12.1	0.92
<u>MERIT ULTRA LIGHTS</u>	2.46	4.9	0.42	Carlton Men.	0.42	1.8	0.14
Viceroy	2.22	17.1	1.24	Doral Full Flavor Men.	0.35	15.4	1.07
Doral Lights	2.01	9.7	0.75	Richland Men. 25's	0.28	14.9	0.97
Kent	1.90	11.8	0.87	New Men.	0.26	1.9	0.13
Vantage Ultra Lights	1.41	5.6	0.42	Kool Ultra	0.26	*	*
Carlton	1.38	1.6	0.16	Malibu Menthol	0.15	15.4	1.17
<u>CAMBRIDGE LIGHTS</u>	1.32	11.3	0.88	<u>PLAYERS LIGHTS MEN, 25's</u>	0.06	9.4	0.74
Doral Full Flavor	1.30	14.2	1.02	Kent Golden Lights Men.	0.04	8.2	0.66
True	1.17	5.2	0.43	<u>80 MM FILTER (BOX)</u>			
Doral Ultra Lights	1.13	5.8	0.46	<u>MARLBORO (BOX)</u>	25.07	15.8	1.12
<u>MERIT (BOX)</u>	1.03	7.6	0.62	Winston (Box)	1.56	15.5	0.95
<u>MARLBORO 25's</u>	1.00	16.1	1.13	<u>PARLIAMENT LIGHTS (BOX)</u>	1.30	9.1	0.76
Winston Ultra Lights	0.97	5.7	0.49	Camel Lights (Box)	0.87	8.9	0.59
<u>CAMBRIDGE FULL FLAVOR</u>	0.97	15.9	1.10	Winston Lights (Box)	0.64	8.1	0.59
Kent III	0.95	3.8	0.31	Magna (Box)	0.56	13.3	0.84
Raleigh	0.94	14.2	0.91	Kool Milds (Box)	0.55	11.7	0.89
Kent Golden Lights	0.92	8.1	0.69	Magna Lites (Box)	0.42	8.8	0.62
L & M	0.82	12.8	1.00	Kent (Box)	0.09	11.0	0.81
New	0.72	1.8	0.14	Doral Full Flavor (Box)	0.00	13.5	0.76
<u>PARLIAMENT LIGHTS</u>	0.69	9.3	0.76	<u>85 MM METAL FILTER</u>			
Richland 25's	0.68	16.1	1.13	Pall Mall	7.77	22.5	1.49
Magna	0.61	12.8	0.89	Chesterfield King	0.78	20.4	1.38
Viceroy Lights	0.52	11.0	0.88	Pyramid	0.32	21.2	1.38
<u>MERIT ULTRA LIGHTS (BOX)</u>	0.52	5.1	0.43	<u>COMMANDER KING SIZE</u>	0.23	23.0	1.57
<u>MARLBORO LIGHTS 25's</u>	0.50	10.7	0.81	<u>70 MM METAL FILTER</u>			
Magna Lites	0.48	10.0	0.76	Camel	4.65	20.0	1.31
Old Gold	0.43	16.0	1.14	Lucky Strike	1.17	23.6	1.48
American Lights	0.38	11.6	0.93	<u>COMMANDER REGULAR</u>	0.03	20.9	1.34
Richland Lights 25's	0.34	10.3	0.82				
Pyramid Lights	0.32	14.0	1.07				
Barclay	0.25	*	*				
Lucky Strike	0.25	13.2	1.03				
Century Lights 25's	0.24	8.7	0.68				
Raleigh Lights	0.21	11.4	0.86				
Century 25's	0.21	14.3	0.94				
Malibu Lights	0.20	8.8	0.78				
American Filters	0.20	15.7	1.24				
Malibu	0.17	18.0	1.12				
<u>PLAYERS LIGHTS 25's</u>	0.12	10.3	0.81				
Chesterfield Lights	0.05	9.9	0.83				

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**ALL HISTORICAL LISTING OF WARDS WITH NAME AND SICKLE COUNT**

THE ESTATE OF THE BIRMINGHAM FEDERAL SAVINGS AND LOAN ASSOCIATION - 201

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## PHILIP MORRIS DATA

## BRANDS RANKED ACCORDING TO FTC TAR

BRAND	SIZE	FTC TAR, NICOTINE, MG/CIG., MG/CIGL.	BRAND	SIZE	FTC TAR, NICOTINE, MG/CIG., MG/CIGL.	
1. Carlton Men. (Box)	100M	1.0	61. Malibu Lights	KF	8.8	0.75
2. New Men.	KFM	1.3	67. Camel Lights (Box)	LF	8.9	0.59
3. Carlton (Box)	100	1.3	68. Vantage Men.	100	8.9	0.65
4. New	KF	1.3	69. Salem Slim Lights (Box)	100M	8.9	0.69
5. Carlton Men.	KFM	1.6	70. Capri 100 Menthol	100M	8.9	0.71
6. Carlton	LP	1.6	71. <u>VA-SLIM-LIGHTS NEW (BOX)</u>	100M	8.9	0.72
7. New	100	2.1	72. Respect Lights (Box)	100M	8.9	0.81
8. New Men.	100M	3.3	73. Respect Lights	100M	8.9	0.82
9. Triumph	KF	3.6	74. Vantage	100	9.0	0.66
10. Carlton	100	3.7	75. More Lights Men. (Box)	100M	9.0	0.66
11. Kent III	KF	3.8	76. Kent Golden Lights	100	9.0	0.79
12. Triumph Men.	KFM	3.9	77. Winston Lights (Box)	LP	9.1	0.59
13. <u>CAMBRIDGE ULTRA LIGHTS</u>	100	4.9	78. Malibu Lights	100	9.1	0.76
14. Carlton Men.	100M	4.9	79. <u>PARLIAMENT LIGHTS (BOX)</u>	LP	9.1	0.76
15. <u>MERIT ULTRA LIGHTS</u>	LP	4.9	80. <u>MERIT NEW</u>	100M	9.2	0.78
16. True Men.	KFM	5.0	81. Kent Golden Lights Men.	100M	9.2	0.82
17. <u>MERIT ULTRA LIGHTS (BOX)</u>	KF	5.1	82. Winston Lights	KF	9.3	0.63
18. True	KF	5.2	83. Salem Lights	KFM	9.3	0.69
19. Kent III (Box)	100	5.2	84. Doral Lights Men.	100M	9.3	0.69
20. Winston Ultra Lights	100	5.3	85. Ritz (Box)	100	9.3	0.75
21. Doral Ultra Lights	100	5.3	86. Capri 100	100	9.3	0.76
22. Salem Ultra Lights	100M	5.4	87. <u>PARLIAMENT LIGHTS</u>	LP	9.3	0.76
23. <u>MERIT ULTRA LIGHTS NEW</u>	100M	5.4	88. <u>ALTRIA LIGHTS</u>	KFM	9.4	0.72
24. Salem Ultra Lights	KFM	5.5	89. <u>PLAYERS LIGHTS NEW 25's</u>	LP	9.4	0.74
25. <u>RAJ LIGHTS NEW (BOX)</u>	100M	5.5	90. Vantage Men.	KFM	9.5	0.64
26. Doral Ultra Lights	KF	5.5	91. Doral Lights Men.	KFM	9.5	0.68
27. Kent III	100	5.5	92. Kent Golden Lights (Box)	100	9.5	0.86
28. Carlton	120	5.5	93. Lucky Strike Lights	100	9.6	0.80
29. Vantage Ultra Lights	KF	5.6	94. Doral Lights	KF	9.7	0.75
30. <u>VIRGINIA SLIMS ULTRAS</u>	100M	5.6	95. <u>MARLBORO LIGHTS NEW (BOX)</u>	KFM	9.7	0.77
31. Triumph Men.	100M	5.6	96. Pall Mall Lights	100	9.9	0.82
32. Carlton Men.	120M	5.6	97. Chesterfield Lights	KF	9.9	0.83
33. Winston Ultra Lights	KF	5.7	98. <u>ALTRIA LIGHTS</u>	100M	10.0	0.78
34. Vantage Ultra Lights	100	5.7	99. <u>MERIT</u>	100	10.0	0.81
35. Triumph	100	5.7	100. More Lights (Box)	100	10.1	0.76
36. Tarotyton Lights	KFC	5.8	101. Chesterfield Lights	100	10.1	0.84
37. <u>MERIT ULTRA LIGHTS</u>	100	5.8	102. Savvy Lights	100	10.2	0.89
38. Savvy Ultra Lights	100	5.8	103. Savvy Lights	100M	10.2	0.90
39. <u>MERIT ULTRA LIGHTS NEW</u>	KFM	5.9	104. Richland Lights 25's	KF	10.3	0.82
40. Pyramid Ultra Lights	100	5.9	105. Winston Lights 100 (Box)	100	10.4	0.72
41. <u>VIRGINIA SLIMS ULTRA LITE</u>	100	6.0	106. <u>RAJ LIGHTS 100 NEW (BOX)</u>	100M	10.4	0.78
42. <u>RAJ LIGHTS NEW (BOX)</u>	100	6.1	107. <u>RAJ LIGHTS NEW</u>	100M	10.4	0.85
43. Malibu Ultra Lights	100	6.2	108. Belair	KFM	10.5	0.79
44. <u>MERIT ULTRA LIGHTS (BOX)</u>	100	6.2	109. <u>MARLBORO LIGHTS (IRON)</u>	KF	10.5	0.79
45. <u>MERIT</u>	KF	7.6	110. <u>PLAYERS LIGHTS 25's</u>	KF	10.5	0.61
46. <u>MERIT (BOX)</u>	KF	7.6	111. Camel Lights	100	10.6	0.78
47. Kool Lights	KFM	7.7	112. Winston Lights	100	10.6	0.76
48. Kent Golden Lights (Box)	LP	7.9	113. Silvia Thins Men.	100M	10.6	0.91
49. True	100	7.9	114. <u>MARLBORO LIGHTS 25's</u>	KF	10.7	0.81
50. <u>MERIT NEW</u>	KFM	8.0	115. Silvia Thins	100	10.7	0.83
51. Newport Lights (Box)	LP	8.0	116. <u>RAJ LIGHTS 100 (BOX)</u>	100	10.7	0.83
52. Kent Golden Lights	KF	8.1	117. Satin	100	10.8	0.88
53. Tarotyton Long Lights	100C	8.1	118. Satin Men.	100M	10.8	0.92
54. Vantage	KF	8.2	119. Magna Lites	KF	10.9	0.76
55. Kent Golden Lights Men.	KFM	8.2	120. Camel Lights	KF	10.9	0.76
56. Lucky Strike Lights	KF	8.2	121. <u>MARLBORO LIGHTS</u>	KF	10.9	0.83
57. Salem Lights	100M	8.2	122. Kent (Box)	LP	11.0	0.81
58. Belair	100M	8.3	123. Viceroy Lights	KF	11.0	0.88
59. <u>VA-SLIM-LIGHTS (BOX)</u>	100	8.3	124. <u>MARLBORO LIGHTS (IRON)</u>	100	11.0	0.88
60. Old Gold Lights	KF	8.3	125. Lucky Strike Men.	100M	11.0	0.89
61. Newport Lights	KFM	8.5	126. <u>CAMBRIDGE LIGHTS NEW</u>	100M	11.0	0.89
62. True Men.	100M	8.6	127. Ritz Men.	100M	11.1	0.81
63. Kool Lights	100M	8.6	128. <u>RAJ LIGHTS</u>	100	11.1	0.88
64. Century Lights 25's	KF	8.7	129. <u>MARLBORO LIGHTS</u>	100	11.2	0.89
65. Magna Lites (Box)	LP	8.8	130. <u>CAMBRIDGE LIGHTS</u>	KF	11.3	0.88

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**PHILIP MORRIS DATA**  
**BRANDS RANKED ACCORDING TO FTC TAR**

BRAND	SIZE	FTC TAR, MG/CIG.	NICOTINE, MG/CIG.	BRAND	SIZE	FTC TAR, MG/CIG.	NICOTINE, MG/CIG.
131. Raleigh Lights	NP	11.4	0.86	197. ALPINE	KPM	15.1	1.02
132. PLAYERS LIGHTS NEW. 25's	100M	11.4	0.90	198. Winston	NP	15.1	1.03
133. Doral Lights	100	11.4	0.91	199. Newport (Box)	LPW	15.1	1.08
134. Malibu (Low Tar) Menthol	100M	11.4	0.93	200. Malibu	100	15.1	1.25
135. Eve Slim Lights Men. (Box)	100M	11.4	0.93	201. ALPINE	100M	15.3	1.08
136. PLAYERS NEW. (BOX)	KPM	11.5	0.86	202. Salem	100M	15.3	1.10
137. R.J. REEDER FILTER	KPC	11.5	0.87	203. Doral Full Flavor	KPM	15.4	1.07
138. Century Lights 25's	100	11.5	0.88	204. Doral Full Flavor	100M	15.4	1.11
139. Kool Milds	100M	11.5	0.92	205. American Filters	100	15.4	1.14
140. American Lights	NP	11.6	0.91	206. Malibu Menthol	KPM	15.4	1.17
141. American Lights	100	11.6	0.91	207. Winston (Box)	LP	15.5	0.93
142. Kool Milds (Box)	LPW	11.7	0.89	208. Camel (Box)	LP	15.5	1.00
143. PLAYERS LIGHTS 25's	100	11.7	0.90	209. MARLBORO NEW.	KPM	15.5	1.08
144. Lark Lights	KPC	11.7	0.91	210. Kool	KPM	15.7	1.12
145. PARLIAMENT LIGHTS	100C	11.7	0.93	211. Salem	KPM	15.7	1.13
146. Kent	NP	11.8	0.87	212. Newport 25's	KPM	15.7	1.14
147. PLAYERS (BOX)	KP	11.8	0.90	213. MARLBORO (BOX)	100	15.7	1.14
148. Kool Milds	KPM	11.8	0.93	214. American Filters	NP	15.7	1.14
149. Eve Slim Lights (Box)	100	11.8	0.96	215. BENSON & HEDGES	100	15.7	1.15
150. CAMBRIDGE LIGHTS	100	12.1	0.91	216. BENSON & HEDGES NEW.	100M	15.7	1.16
151. CAMBRIDGE LIGHTS NEW.	KPM	12.1	0.92	217. Century 25's	100	15.8	1.03
152. Lark Lights	100C	12.3	0.98	218. MARLBORO (BOX)	LP	15.8	1.12
153. Richland Lights 25's	100	12.3	0.93	219. CAMBRIDGE FULL FLAVOR	KP	15.9	1.10
154. Lucky Strike	100	12.3	0.98	220. MARLBORO	KP	15.9	1.13
155. EX-LITE (BOX)	100	12.3	1.06	221. CAMBRIDGE FULL FLAVOR	100	16.0	1.10
156. Viceroy Lights	100	12.6	0.96	222. Old Gold	KP	16.0	1.14
157. Eve Lights (Box)	120	12.6	1.11	223. Kool	100M	16.0	1.21
158. Kent	100	12.7	0.93	224. Max	120	16.0	1.24
159. Magna	NP	12.8	0.89	225. Winston	100	16.1	0.98
160. Raleigh Lights	100	12.8	0.96	226. MARLBORO 25's	KP	16.1	1.13
161. L&M	NP	12.8	1.00	227. Richland 25's	KP	16.1	1.13
162. L&M	100	12.8	1.00	228. R.J. REEDER (BOX)	100	16.1	1.16
163. Lark	KPC	12.8	1.10	229. BENSON & HEDGES	100	16.1	1.18
164. Tarreyton	KPC	12.9	0.90	230. Max Men.	120M	16.2	1.24
165. Tarreyton	100C	13.1	0.95	231. Newport	KPM	16.3	1.18
166. L&M (Box)	LP	13.1	1.04	232. R.J. REEDER NEW. (BOX)	100M	16.3	1.22
167. Eve Lights Men. (Box)	120M	13.1	1.14	233. MARLBORO	100	16.5	1.19
168. VA-SILVER LIGHTS (BOX)	120	13.2	1.02	234. Richland 25's	100	16.5	1.23
169. Lucky Strike (Box)	NP	13.2	1.03	235. Pall Mall	100	16.6	1.21
170. Magna (Box)	LP	13.3	0.94	236. BENSON & HEDGES NEW. (BOX)	100M	16.8	1.18
171. PLAYERS NEW. (BOX)	100M	13.3	1.01	237. More Men.	120M	17.0	1.27
172. PLAYERS (BOX)	100	13.3	1.03	238. Viceroy	KP	17.1	1.24
173. Kent Men.	100M	13.4	0.98	239. Tall	120	17.2	1.47
174. Pyramid Lights	100	13.4	1.04	240. More	120	17.3	1.24
175. Doral Full Flavor (Box)	LP	13.5	0.76	241. Newport	100M	17.3	1.26
176. VA-SILVER LIGHTS NEW. (BOX)	120M	13.6	1.03	242. Chesterfield	KMP	17.6	1.14
177. Lark	100C	13.8	1.16	243. Spring	100M	17.7	1.37
178. VIRGINIA SLIMS	100	14.0	1.02	244. Viceroy	100	17.9	1.30
179. Pyramid Lights	NP	14.0	1.07	245. Newport 25's	100M	18.0	1.33
180. Pyramid Lights	100M	14.1	1.07	246. Old Gold	100	18.0	1.41
181. Raleigh	NP	14.2	0.91	247. Tall Men.	120M	18.4	1.37
182. Camel	NP	14.2	0.94	248. Kool	KMP	18.7	1.31
183. Doral Full Flavor	NP	14.2	1.02	249. Camel	KMP	20.0	1.31
184. Pall Mall	NP	14.2	1.06	250. Chesterfield King	KMP	20.4	1.38
185. Raleigh	100	14.3	0.92	251. COMMANDER REGULAR	KMP	20.6	1.34
186. VIRGINIA SLIMS NEW.	100M	14.4	1.04	252. Pyramid	KMP	21.2	1.35
187. Century 25's	NP	14.5	0.94	253. Raleigh	KMP	22.0	1.30
188. Kool (Box)	LPW	14.7	1.00	254. Pall Mall	KMP	22.8	1.49
189. MARLBORO NEW. (BOX)	120M	14.7	1.11	255. M. Tarreyton	KMP	22.8	1.80
190. St. Morris	100	14.7	1.13	256. PLAYERS (BOX)	KMP	23.2	1.68
191. St. Morris Men.	100M	14.8	1.02	257. MARLBORO CIGARS (BOX)	KMP	23.2	1.79
192. BENSON & HEDGES (BOX)	NP	14.8	1.37	258. Lucky Strike	KMP	23.6	1.49
193. Richland Men. 25's	KPM	14.9	0.97	259. COMMANDER KING SIZE	KMP	23.8	1.37
194. Doral Full Flavor	100	14.9	1.00	260. Old Gold	KMP	23.8	1.68
195. MARLBORO (BOX)	120	14.9	1.17				
196. Malibu	NP	15.0	1.18				

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**ULTRA LOW TAR 85 MM FILTER CIGARETTES  
(6 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)**

	<u>Nov</u>	<u>Carlton</u>	<u>Kent_III</u>	<u>Merit Ultra Lts.</u>	<u>Merit Ultra Lts. (Box)</u>
<sup>1</sup> Sales	0.72	1.38	0.95	2.46	0.52
<b>Smoke</b>					
FTC Tar, mg/cig.	1.5	1.6	3.8	4.9	5.1
Nicotine, mg/cig.	0.14	0.16	0.31	0.42	0.43
Puffs/cig.	6.1	6.6	6.8	7.2	7.4
Filtration Eff., %	74	74	64	64	62
Filler Rod TPM, mg/cig.	23.5	23.5	27.3	27.7	28.1
CO, mg/cig.	2.3	1.9	3.7	5.2	5.5
<b>Cigarette</b>					
Total R.R., mm of H <sub>2</sub> O	107	114	107	110	120
Static Burn. Time, min.	5.3	5.5	6.0	6.8	6.9
Length, mm	84.1	83.2	84.0	84.0	83.1
Circumference, mm	25.0	24.9	24.9	24.9	24.9
<b>Filter</b>					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.3	0.7	1.0	1.0	0.9
Permeability, ml/cm <sup>2</sup> x min.	38	48	32	46	47
<b>Tipping Paper</b>					
Type	CA	CA	-	CA	CA
Inner	-	-	CA	-	-
Outer	-	-	CA	-	-
RTD, mm of H <sub>2</sub> O	160	152	117	131	131
Length, mm	27.9	25.2	24.9	27.0	27.1
Weight, g	0.19	0.18	0.15	0.18	0.18
Fiber density/shape	2.1/Y	2.0/Y	-	3.0/Y	3.2/Y
Inner	-	-	1.8/Y	-	-
Outer	-	-	2.9/Y	-	-
<b>Ventilation</b>					
Length, mm	31.0	30.0	32.0	32.0	32.0
Color	White	White	White	Cork	Cork
Ventilation, %	74	72	60	53	52
<b>Filler</b>					
Total alkaloids, % (DWB)	2.37	2.29	2.36	2.23	2.31
Total red. sugars, % (DWB)	4.8	3.6	5.7	5.9	5.6
Reconstituted Tob., %	18	20	16	22	22
Expanded Stems, %	None	None	None	None	None
Expanded Tob., %	53	46	25	21	21
Wt. of Tob., g (12.5% OV)	0.473	0.531	0.585	0.605	0.604
Rod Length, mm	56.3	58.0	59.1	57.0	56.0
Rod Density, g/cc	0.169	0.185	0.201	0.215	0.219

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**ULTRA LOW TAR 85 MM FILTER CIGARETTES  
(6 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)**

<u>Trade</u>	<u>Vantage Ultra Lights</u>	<u>Minston Ultra Lights</u>	<u>Barclay*</u>	<u>Sales</u>
1.17	1.41	0.97	0.25	
5.2	5.6	5.7	*	<b>Smoke</b>
0.43	0.42	0.45	*	FTC Tar, mg/cig.
7.8	6.8	6.6	*	Nicotine, mg/cig.
59	62	61	61	Puffs/cig.
27.6	28.0	27.0	31.5	Filtration Eff., %
5.3	7.0	7.1	*	Filler Rod TPM, mg/cig.
				CO, mg/cig.
63	115	119	46	<b>Cigarette</b>
6.6	6.4	6.3	7.7	Total RTD, mm of H <sub>2</sub> O
84.4	83.8	84.0	83.8	Static Burn. Time, min.
24.9	25.0	25.0	24.9	Length, mm
				Circumference, mm
Cit.	Cit.	Cit.	Cit.	<b>Paper</b>
0.6	1.6	1.6	0.4	Component Type
40	25	25	25	Component Percent
				Permeability, ml/cm <sup>2</sup> x min.
-	CA	CA	CA	<b>Filter</b>
CA	-	-	-	Type
PL	-	-	-	Inner
111	129	133	89	Outer
25.0	26.8	27.0	26.9	RTD, mm of H <sub>2</sub> O
0.18	0.20	0.19	0.20	Length, mm
-	2.6/Y	2.7/Y	2.4/Y	Weight, g
1.9/Y	-	-	-	Fiber denier/shape
-	-	-	-	Inner
30.0	31.0	31.0	32.0	Outer
White	White	Cork	Cork	Tipping Paper
60	50	46	82	Length, mm
				Color
				Ventilation, %
2.33	2.14	2.18	2.07	<b>Filler</b>
5.4	7.3	6.4	6.4	Total alkaloids, % (DMS)
20	24	24	14	Total red. sugars, % (DMS)
None	None	None	7	Reconstituted Tob., %
14	25	25	11	Expanded Stems, %
0.669	(0.895)	(0.874)	0.674	Expanded Tob., %
59.4	87.0	57.0	56.9	Wt. of Tob., g (12.54 CIV)
0.228	(0.210)	(0.202)	0.240	Rod Length, mm
				Rod Density, g/cc

\*The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and Kool Ultra cigarette smoke deliveries. Data are given on page XII.

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**LOW TAR 85 MM FILTER CIGARETTES**  
 (15 MG TAR OR LESS)  
 (Brands Ranked by FTC Tar, left to right)

	<u>Merit</u>	<u>Merit (Box)</u>	<u>Kent Golden Lights</u>	<u>Vantage</u>
<b>Sales</b>	3.61	1.03	0.92	3.77
<b>Smoke</b>				
FTC Tar, mg/cig.	7.6	7.6	8.1	8.2
Nicotine, mg/cig.	0.62	0.62	0.69	0.58
Puffs/cig.	7.6	7.3	7.1	7.3
Filtration Eff., %	61	60	52	60
Filter Rod TPM, mg/cig.	28.4	27.3	28.5	28.5
CO, mg/cig.	8.4	8.8	7.2	10.7
<b>Cigarette</b>				
Total RTD, mm of H <sub>2</sub> O	122	124	106	134
Static Burn. Time, min.	7.2	7.6	6.7	6.9
Length, mm	84.1	82.9	83.9	83.9
Circumference, mm	24.9	24.9	25.0	25.1
<b>Filter</b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	1.7	1.4	2.1	1.0
Permeability, ml/cm <sup>2</sup> x min.	44	43	32	37
<b>Tipping Paper</b>				
Length, mm	32.0	32.0	32.0	30.0
Color	Cork	Cork	White	Cork
Ventilation, %	33	29	36	25
<b>Tobacco</b>				
Total alkaloids, % (DMB)	2.09	2.09	2.29	1.87
Total red. sugars, % (DMB)	6.4	6.5	7.7	6.5
Reconstituted Tob., %	22	22	22	24
Expanded Stems, %	3	3	None	None
Expanded Tob., %	12	12	11	20
Wt. of Tob., g (12.5g OY)	0.669	0.660	0.678	0.655
Rod Length, mm	57.1	55.8	59.0	58.8
Rod Density, g/cc	0.238	0.239	0.231	0.222

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**LOW TAR 85 MM FILTER CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

<u>Winston Lights</u>	<u>Parliament Lights</u>	<u>Marlboro Lights (Max)</u>	<u>Marlboro Lights 25's</u>
6.51	0.69	11.96	0.50
9.3	9.3	10.5	10.7
0.65	0.76	0.79	0.81
7.1	7.8	8.1	8.4
58	56	57	57
27.8	28.0	31.9	31.3
10.3	9.1	10.2	10.6
123	118	120	118
7.1	7.1	8.2	8.2
83.0	83.9	83.1	84.3
25.0	24.8	29.0	25.0
Cit.	Cit.	Cit.	Cit.
0.5	2.3	0.5	0.3
40	47	32	34
CA	CA	CA	CA
101	119	100	105
25.8	25.0	27.0	27.0
0.18	0.19	0.17	0.17
2.8/Y	2.8/Y	3.0/Y	3.0/Y
31.0	30.0	31.0	31.0
Cork	White	White	White
20	33	22	29
1.80	2.16	2.04	2.10
6.7	6.9	6.8	7.0
24	23	22	22
None	3	3	3
16	12	12	12
0.632	0.693	0.670	0.682
57.0	58.0	56.1	57.4
0.222	0.240	0.241	0.240

**<sup>1</sup>Sales:****Smoke**

FTC Tar, mg/cig.  
 Nicotine, mg/cig.  
 Puffs/cig.  
 Filtration Eff., %  
 Filler Rod TPM, mg/cig.  
 CO, mg/cig.

**Cigarette**

Total RTD, mm of H<sub>2</sub>O  
 Static Burn. Time, min.  
 Length, mm  
 Circumference, mm

**Paper**

Component Type  
 Component Percent  
 Permeability, ml/cm<sup>2</sup> x min.

**Filter**

Type  
 RTD, mm of H<sub>2</sub>O  
 Length, mm  
 Weight, g  
 Fiber denier/shape  
 Tipping Paper  
 Length, mm  
 Color  
 Ventilation, %

**Filler**

Total alkaloids, % (DMS)  
 Total red. sugars, % (DMS)  
 Reconstituted Tab., %  
 Expanded Stems, %  
 Expanded Tab., %  
 Wt. of Tab., g (12.5% OV)  
 Rod Length, mm  
 Rod Density, g/cm<sup>3</sup>

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2031438354

**LOW TAR 85 MM FILTER CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>Camel</u> <u>Lights</u>	<u>Marlboro</u> <u>Lights</u>	<u>Raleigh</u> <u>Lights</u>
<b>Sales</b>	3.45	15.66	0.21
<b>Smoke</b>			
FTC Tar, mg/cigrt.	10.9	10.9	11.4
Nicotine, mg/cigrt.	0.76	0.83	0.86
Puffs/cigrt.	7.2	8.3	8.0
Filtration Eff., %	60	56	59
Filler Rod TPM, mg/cigrt.	29.3	31.8	29.6
CO, mg/cigrt.	10.4	10.9	12.3
<b>Cigarette</b>			
Total RTD, mm of H <sub>2</sub> O	114	122	134
Static Burn. Time, min.	7.7	8.1	7.5
Length, mm	84.1	84.2	83.5
Circumference, mm	25.0	24.9	25.0
<b>Paper</b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.9
Permeability, ml/cm <sup>2</sup> x min.	30	32	30
<b>Filter</b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	83	99	102
Length, mm	27.0	27.0	26.6
Weight, g	0.18	0.17	0.17
Fiber denier/shape	2.4/Y	3.0/Y	3.0/Y
<b>Tipping Paper</b>			
Length, mm	31.0	31.0	32.0
Color	Cork	White	Cork
Ventilation, %	15	21	18
<b>Filler</b>			
Total alkaloids, % (DMS)	1.86	2.07	2.10
Total red. sugars, % (DMS)	6.9	7.2	6.7
Reconstituted Tob., %	24	22	16
Expanded Stems, %	None	3	9
Expanded Tob., %	16	12	None
Wt. of Tob., g (12.50 OY)	0.638	0.684	0.728
Rod Length, mm	57.2	57.2	56.9
Rod Density, g/cc	0.224	0.242	0.257

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**LOW TAR 85 MM FILTER CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

Kent      L & M      Lucky Strike

1.90	0.82	0.25
------	------	------

<sup>1</sup>Sales

11.8	12.8	13.2
0.87	1.00	1.03
8.3	7.5	8.4
52	45	49
27.6	27.5	28.9
111.9	111.9	13.0

**Smoke**

FTC Tar, mg/cig.  
 Nicotine, mg/cig.  
 Puffs/cig.  
 Filtration Eff., %  
 Filler Rod TPM, mg/cig.  
 CO, mg/cig.

137	109	123
7.2	7.6	8.3
84.3	84.1	82.9
25.0	24.7	25.0

**Cigarette**

Total RTD, mm of H<sub>2</sub>O  
 Static Burn. Time, min.  
 Length, mm  
 Circumference, mm

Cit.	Cit.	Cit.
0.6	0.4	0.8
37	171*	26

**Paper**

Component Type  
 Component Percent  
 Permeability, ml/cm<sup>2</sup> x min.

CA	CA	CA
91	66	74
20.9	24.7	25.0
0.14	0.14	0.16
3.0/Y	3.7/Y	2.8/Y
25.0	30.0	30.0
White	White	Cork
16	None	13

**Filter**

Type  
 RTD, mm of H<sub>2</sub>O  
 Length, mm  
 Weight, g  
 Fiber denier/shape  
 Tipping Paper  
 Length, mm  
 Color  
 Ventilation, %

2.01	2.21	2.00
6.7	7.7	8.1
22	15	20
None	5	None
11	23	12
0.749	0.616	0.715
63.4	59.4	57.9
0.238	0.214	0.248

**Filler**

Total alkaloids, % (DWB)  
 Total red. sugars, % (DWB)  
 Reconstituted Tob., %  
 Expanded Stems, %  
 Expanded Tob., %  
 Wt. of Tob., g (12.5% OV)  
 Rod Length, mm  
 Rod Density, g/cc

\*These cigarette papers are perforated.

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**LOW TAR 85 MM FILTER CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>Raleigh</u>	<u>Camel</u>	<u>Winston</u>
<sup>1</sup> Sales	0.94	3.55	14.14
<b>Smoke</b>			
FTC Tar, mg/cig.	14.2	14.2	15.1
Nicotine, mg/cig.	0.91	0.94	1.05
Puffs/cig.	7.3	8.1	8.2
Filtration Eff., %	45	46	49
Filler Rod TPM, mg/cig.	28.4	28.1	31.7
CO, mg/cig.	12.6	13.1	13.8
<b>Cigarette</b>			
Total RTD, mm of H <sub>2</sub> O	116	106	120
Static Burn. Time, min.	6.8	7.0	7.6
Length, mm	83.9	83.9	84.0
Circumference, mm	25.0	25.0	25.0
<b>Filter</b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	64	68	78
Length, mm	20.9	21.1	21.0
Weight, g	0.12	0.13	0.14
Fiber denier/shape	2.8/Y	3.0/Y	3.6/Y
Tipping Paper			
Length, mm	26.0	25.0	25.0
Color	Cork	Cork	Cork
Ventilation, %	None	12	6
<b>Filler</b>			
Total alkaloids, % (DWB)	2.06	1.84	2.08
Total red. sugars, % (DWB)	7.2	6.6	6.6
Reconstituted Tob., %	11	24	24
Expanded Stems, %	14	None	None
Expanded Tob., %	12	16	16
Wt. of Tob., g (12.5% OV)	0.707	0.710	0.707
Rod Length, mm	63.0	62.8	63.0
Rod Density, g/cc	0.226	0.226	0.225

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**ULTRA LOW TAR 85 MM FILTER MENTHOL CIGARETTES**  
 (6 MG TAR OR LESS)  
 (Brands Ranked by FTC Tar, left to right)

	<u>Mon.</u>	<u>Camel</u>	<u>True</u>
<sup>1</sup> Sales	0.26	0.42	0.52
<u>Smoke</u>			
FTC Tar, mg/cig.	1.5	1.5	5.0
Nicotine, mg/cig.	0.13	0.14	0.44
Puffs/cig.	6.3	6.7	8.0
Filtration Eff., %	73	73	55
Filler Rod TPM, mg/cig.	23.2	22.1	27.0
CO, mg/cig.	1.8	1.7	5.7
<u>Cigarette</u>			
Total RTD, mm of H <sub>2</sub> O	112	110	62
Static Burn. Time, min.	5.8	5.6	6.8
Length, mm	84.3	83.0	84.1
Circumference, mm	25.0	25.0	24.9
<u>Filter</u>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.8	0.7
Permeability, ml/cm <sup>2</sup> x min.	37	47	37
Type	CA	CA	-
Inner	-	-	CA
Outer	-	-	PL
RTD, mm of H <sub>2</sub> O	170	148	114
Length, mm	26.9	25.0	24.9
Weight, g	0.20	0.18	0.17
Fiber denier/shape	1.9/Y	1.8/Y	-
Inner	-	-	1.8/Y
Outer	-	-	-
Tipping Paper			
Length, mm	31.0	30.0	30.0
Color	White	White	White
Ventilation, %	75	73	61
<u>Filler</u>			
Total alkaloids, % (DMS)	2.40	2.31	2.35
Total red. sugars, % (DMS)	4.6	6.2	5.5
Reconstituted Tob., %	15	20	20
Expanded Stems, %	None	None	None
Expanded Tob., %	53	46	14
Wt. of Tob., g (12.5% CV)	(0.470)	0.528	0.664
Rod Length, mm	57.4	59.0	59.2
Rod Density, g/cc	(0.165)	0.182	0.227
<u>Menthol, mg/cig.</u>			
Smoke	0.17	0.20	0.20
Filler	3.8	4.7	2.2
Filter	4.9	3.2	1.1

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**ULTRA LOW TAR 85 MM FILTER MENTHOL CIGARETTES**  
 (6 MG TAR OR LESS)  
 (Brands Ranked by FTC Tar, left to right)

<u>Salem</u> <u>Ultra Lights</u>	<u>Merit</u> <u>Ultra Lights</u>	<u>Kool Ultra*</u>	
1.22	0.52	0.26	<u>Sales</u>
5.3	5.9	*	<u>Smoke</u>
0.43	0.50	*	FTC Tar, mg/cig.
7.3	8.1	*	Nicotine, mg/cig.
63	64	61	Puffs/cig.
27.0	29.5	27.2	Filtration Eff., %
6.7	6.0	*	Filler Rod TPM, mg/cig.
			CO, mg/cig.
116	108	32	<u>Cigarette</u>
6.8	7.6	6.9	Total RTD, mm of H <sub>2</sub> O
84.1	84.1	83.7	Static Burn. Time, min.
25.0	24.9	24.9	Length, mm
			Circumference, mm
Cit.	Cit.	Cit.	<u>Paper</u>
1.6	0.4	0.9	Component Type
24	32	47	Component Percent
			Permeability, ml/cm <sup>2</sup> x min.
CA	CA	CA	<u>Filter</u>
-	-	-	Type
-	-	-	Inner
130	128	86	Outer
27.0	27.0	27.1	RTD, mm of H <sub>2</sub> O
0.19	0.18	0.18	Length, mm
2.6/Y	2.8/Y	4.0/Y	Weight, g
-	-	-	Fiber denier/shape
-	-	-	Inner
31.0	32.0	32.0	Outer
White	Cork	Cork	Tipping Paper
51	52	74	Length, mm
			Color
			Ventilation, %
2.10	2.21	2.25	<u>Filler</u>
4.9	5.4	6.3	Total alkaloids, % (DWB)
24	22	13	Total red. sugars, % (DWB)
None	None	10	Reconstituted Tab., %
28	21	11	Expanded Stems, %
0.596	0.608	0.653	Expanded Tab., %
57.1	57.1	56.5	Wt. of Tab., g (12.5% OV)
0.210	0.216	0.234	Rod Length, mm
			Rod Density, g/cc
0.30	0.41	0.09	<u>Menthol, mg/cig.</u>
2.5	3.3	1.9	<u>Smoke</u>
1.5	2.0	1.2	<u>Filler</u>
			<u>Filter</u>

\*The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and Kool Ultra cigarette smoke deliveries. Data are given on page XII.

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**LOW TAR 85 MM FILTER MENTHOL CIGARETTES**  
 (15 MG TAR OR LESS)  
 (Brands Ranked by FTC Tar, left to right)

	Kool Lights	Merit	Kent Golden Lights	Newport Lights
<sup>1</sup> Sales	0.48	0.56	0.04	0.02
<u>Smoke</u>				
FTC Tar, mg/cig.	7.7	8.0	8.2	8.5
Nicotine, mg/cig.	0.68	0.68	0.66	0.73
Puffs/cig.	7.3	8.3	7.2	7.3
Filtration Eff., %	56	62	51	52
Filler Rod TPM, mg/cig.	27.4	30.4	27.7	29.5
CO, mg/cig.	7.9	9.3	7.1	7.5
<u>Cigarette</u>				
Total RTD, mm of H <sub>2</sub> O	116	127	102	102
Static Burn. Time, min.	7.3	8.0	6.8	6.9
Length, mm	83.7	84.0	84.0	84.2
Circumference, mm	25.0	24.9	25.0	25.0
<u>Paper</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.2	0.5	2.1	2.0
Permeability, ml/cm <sup>2</sup> x min.	44	45	27	28
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	103	120	86	86
Length, mm	26.9	27.0	29.0	29.0
Weight, g	0.17	0.18	0.15	0.15
Fiber denier/shape	2.5/Y	2.6/Y	3.1/Y	2.9/Y
<u>Tipping Paper</u>				
Length, mm	32.0	32.0	32.0	32.0
Color	Cork	Cork	White	Cork
Ventilation, %	35	32	39	34
<u>Tobac</u>				
Total alkaloids, % (DWB)	2.28	2.13	2.32	2.30
Total red. sugars, % (DWB)	6.3	6.3	7.5	7.8
Reconstituted Tob., %	13	22	22	22
Expanded Stems, %	10	3	None	None
Expanded Tob., %	11	12	11	11
Wt. of Tob., g (12.5% OV)	0.650	0.672	0.683	0.675
Rod Length, mm	56.8	57.0	59.0	59.1
Rod Density, g/cc	0.231	0.239	0.232	0.230
<u>Menthol, mg/cig.</u>				
Smoke	0.26	0.43	0.30	0.31
Filler	1.9	2.0	1.9	1.9
Filter	1.5	1.9	1.3	1.3

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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LOW TAR 85 MM FILTER MENTHOL CIGARETTES  
(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

Salem      Marlboro  
Lights      Lights (Box)

<u>Salem</u>	<u>Vantage</u>	<u>Marlboro</u>
8.64	0.68	0.81

9.3	9.5	9.7
0.69	0.64	0.77
7.1	7.7	7.7
88	89	89
26.0	29.1	26.9
10.8	11.2	9.3

127	123	107
6.9	7.3	7.3
84.0	84.0	82.9
25.0	25.1	24.9

<u>Cit.</u>	<u>Cit.</u>	<u>Cit.</u>
1.0	1.7	0.8
40	26	43

<u>CA</u>	<u>CA</u>	<u>CA</u>
111	104	89
26.9	25.1	27.1
0.18	0.29	0.17
3.4/Y	1.7/R	3.9/Y
31.0	30.0	31.0
White	Cork	White
22	28	24

2.03	1.83	2.21
7.1	7.7	8.4
24	24	22
None	None	None
16	16	15
0.626	(0.679)	0.642
57.1	58.9	55.8
0.220	(0.230)	0.232

0.38	0.34	0.47
2.1	2.4	2.3
1.7	1.8	1.9

Sales

Smoke

FTC Tar, mg/cig.  
Nicotine, mg/cig.  
Puffs/cig.  
Filtration %, %  
Filler Rod TM, mg/cig.  
CO, mg/cig.

Cigarette

Total RTD, mm of H<sub>2</sub>O  
Static Burn. Time, min.  
Length, mm  
Circumference, mm

Paper

Component Type  
Component Percent  
Permeability, ml/cm<sup>2</sup> x min.

Filter

Type  
RTD, mm of H<sub>2</sub>O  
Length, mm  
Weight, g  
Fiber denier/shape  
Tipping Paper  
Length, mm  
Color  
Ventilation, %

Filler

Total alkaloids, % (DME)  
Total red. sugars, % (DME)  
Reconstituted Tob., %  
Expanded Stems, %  
Expanded Tob., %  
Wt. of Tob., g (12.5% OV)  
Rod Length, mm  
Rod Density, g/cc

Menthol, mg/cig.

Smoke  
Filler  
Filter

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LOW TAR 85 MM FILTER MENTHOL CIGARETTES  
(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

	<u>Belair</u>	<u>Kool</u>	<u>Kool</u>
<u>Milds (Box)</u>	<u>Milds</u>	<u>Milds</u>	
<sup>1</sup> Sales	0.84	0.93	2.77
<u>Smoke</u>			
FTC Tar, mg/cig.	10.5	11.7	11.8
Nicotine, mg/cig.	0.79	0.89	0.93
Puffs/cig.	6.9	7.6	7.6
Filtration Eff., %	49	49	51
Filler Rod TPM, mg/cig.	27.6	28.9	30.4
CO, mg/cig.	9.2	10.0	11.0
<u>Cigarette</u>			
Total R.R., mm of H <sub>2</sub> O	110	119	118
Static Burn, min.	7.0	6.9	7.6
Length, mm	83.6	79.8	84.1
Circumference, mm	25.0	25.0	24.9
<u>Paper</u>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.3	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	44	23	24
<u>Filter</u>			
Type	CA	CA	CA
R.R., mm of H <sub>2</sub> O	77	76	78
Length, mm	26.8	19.0	26.9
Weight, g	0.16	0.12	0.16
Fiber denier/shape	4.0/Y	3.0/Y	3.3/Y
Tipping Paper			
Length, mm	32.0	26.0	32.0
Color	White	Cork	Cork
Ventilation, %	19	21	17
<u>Filler</u>			
Total alkaloids, % (DMS)	2.24	2.26	2.26
Total red. sugars, % (DMS)	6.2	6.4	6.7
Reconstituted Tob., %	11	13	13
Expanded Stems, %	14	10	10
Expanded Tob., %	12	11	11
Wt. of Tob., g (12.5% OV)	0.633	0.701	0.673
Rod Length, mm	56.8	60.8	57.2
Rod Density, g/cc	0.224	0.232	0.238
<u>Menthol, mg/cig.</u>			
Smoke	0.36	0.48	0.44
Filler	1.3	2.3	2.1
Filter	1.0	1.1	1.4

<sup>1</sup>third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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FULL FLAVORED 85 MM FILTER MENTHOL CIGARETTES  
(16 MG TAR OR MORE)  
(Brands Ranked by FTC Tar, left to right)

	<u>Marlboro</u>	<u>Kool</u>	<u>Salem</u>	<u>Newport</u>
<u>Sales</u>	0.93	9.64	9.41	6.21
<u>Smoke</u>				
FTC Tar, mg/cig.	15.5	15.7	15.7	16.3
Nicotine, mg/cig.	1.08	1.12	1.13	1.18
Puffs/cig.	8.4	7.4	7.8	7.9
Filtration Eff., %	43	44	46	45
Filler Rod TPM, mg/cig.	26.5	28.5	27.8	29.6
CO, mg/cig.	13.4	14.4	14.3	15.9
<u>Cigarette</u>				
Total RTD, mm of H <sub>2</sub> O	113	111	114	116
Static Burn. Time, min.	7.4	7.1	7.2	7.2
Length, mm	89.9	89.8	84.1	84.1
Circumference, mm	24.9	25.0	25.1	25.0
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	63	57	67	64
Length, mm	21.0	20.9	21.0	20.9
Weight, g	0.12	0.12	0.13	0.12
Fiber denier/shape	4.1/Y	4.1/Y	2.7/Y	3.4/Y
Tipping Paper				
Length, mm	25.0	26.0	25.0	25.0
Color	Cork	Cork	White	Cork
Ventilation, %	None	None	None	None
<u>Filler</u>				
Total alkaloids, % (DMS)	2.14	2.46	2.22	2.32
Total red. sugars, % (DMS)	0.4	6.2	6.7	8.2
Reconstituted Tob., %	22	13	24	22
Expanded Stems, %	None	10	None	None
Expanded Tob., %	15	11	16	11
Wt. of Tob., g (12.5% OV)	0.726	0.711	0.704	0.721
Rod Length, mm	62.9	62.9	63.0	63.2
Rod Density, g/cc	0.238	0.226	0.223	0.230
<u>Menthol, mg/cig.</u>				
Smoke	0.96	0.90	0.96	0.49
Filler	2.0	1.9	2.1	1.6
Filter	1.2	1.0	0.9	0.8

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**ULTRA LOW TAR 100 MM FILTER CIGARETTES  
(6 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)**

	<u>Carlton</u> <u>(Box)</u>	<u>Max</u>	<u>Carlton</u>	<u>Winston</u> <u>Ultra Lights</u>
<b>Sales</b>	1.02	1.77	2.02	1.29
<b>Smoke</b>				
FTC Tar, mg/cig.	1.9	2.1	3.7	5.3
Nicotine, mg/cig.	0.13	0.20	0.32	0.42
Puffs/cig.	8.3	7.4	8.5	8.6
Filtration Eff., %	71	70	62	68
Filter Rod TPM, mg/cig.	22.2	23.1	23.9	25.0
CO, mg/cig.	1.1	2.3	3.4	6.4
<b>Cigarette</b>				
Total RMD, mm of H <sub>2</sub> O	88	94	108	129
Static Burn. Time, min.	5.8	5.4	5.7	6.5
Length, mm	98.7	98.8	99.9	98.9
Circumference, mm	24.8	25.0	24.5	25.0
<b>Param</b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	1.0	1.6	0.9	0.9
Permeability, ml/cm <sup>2</sup> x min.	47	24	27	38
<b>Filter</b>				
Type	CA	CA	CA	CA
Inner	-	-	-	-
Outer	-	-	-	-
RMD, mm of H <sub>2</sub> O	123	137	123	138
Length, mm	26.8	29.7	26.9	31.0
Weight, g	0.19	0.20	0.19	0.22
Fiber denier/shape	3.2/I	2.5/Y	3.4/Y	2.5/Y
Inner	-	-	-	-
Outer	-	-	-	-
Tipping Paper				
Length, mm	35.0	35.0	32.0	35.0
Color	White	White	White	Cork
Ventilation, %	78	73	63	49
<b>Filler</b>				
Total alkaloids, % (DWB)	2.30	2.41	2.28	2.07
Total red. sugars, % (DWB)	6.3	4.9	5.5	6.3
Reconstituted Tob., %	20	15	20	24
Expanded Stems, %	None	None	None	None
Expanded Tob., %	46	53	46	23
Wt. of Tob., g (12.5g OY)	0.634	0.579	0.644	(0.696)
Rod Length, mm	71.8	69.2	73.0	68.0
Rod Density, g/cc	0.185	0.168	0.186	(0.206)

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**ULTRA LOW TAR 100 MM FILTER CIGARETTES**  
 (6 MG TAR OR LESS)  
 (Brands Ranked by FTC Tar, left to right)

<u>Kent III</u>	<u>Vantage Ultra Lights</u>	<u>Merit Ultra Lights</u>	
1.12	1.69	1.88	<sup>1</sup> Sales
5.5	5.7	5.8	<u>Smoke</u>
0.47	0.46	0.51	FTC Tar, mg/cig.
8.1	8.8	9.9	Nicotine, mg/cig.
66	68	67	Puffs/cig.
28.5	26.4	29.4	Filtration Eff., %
6.5	7.0	6.1	Filler Rod TPM, mg/cig.
			CO, mg/cig.
117	126	109	<u>Cigarette</u>
6.0	6.3	7.3	Total RTD, mm of H <sub>2</sub> O
99.2	98.8	99.6	Static Burn. Time, min.
24.9	25.0	24.9	Length, mm
			Circumference, mm
Cit.	Cit.	Cit.	<u>Paper</u>
2.2	1.7	0.5	Component Type
29	26	31	Component Percent
			Permeability, ml/cm <sup>2</sup> x min.
-	CA	CA	<u>Filter</u>
CA	-	-	Type
CA	-	-	Inner
124	148	135	Outer
27.0	30.7	31.3	RTD, mm of H <sub>2</sub> O
0.16	0.22	0.20	Length, mm
-	2.3/Y	3.0/Y	Weight, g
1.8/Y	-	-	Fiber denier/shape
3.0/Y	-	-	Inner
			Outer
34.0	35.0	36.0	Tipping Paper
White	White	Cork	Length, mm
51	53	53	Color
			Ventilation, %
2.41	2.13	2.27	<u>Filler</u>
6.8	6.0	6.0	Total alkaloids, % (DWB)
15	24	22	Total red. sugars, % (DWB)
None	None	None	Reconstituted Tob., %
23	23	21	Expanded Stems, %
0.714	(0.709)	0.723	Expanded Tob., %
72.2	68.1	68.2	Wt. of Tob., g (12.54 OV)
0.200	(0.209)	0.216	Rod Length, mm
			Rod Density, g/cc

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**ULTRA LOW TAR 100 MM FILTER CIGARETTES**  
**(6 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

	B & W Deluxe Ultra Lights (Marl)	Merit Ultra Lights (Marl)	BARCLAY*
<sup>1</sup> Sales	2.42	0.32	0.25
<b>Smoke</b>			
FTC Tar, mg/cig.	6.1	6.2	*
Nicotine, mg/cig.	0.49	0.56	*
Puffs/cig.	8.9	9.2	*
Filtration Eff., %	61	64	60
Filler Rod TPM, mg/cig.	26.1	27.1	31.7
CO, mg/cig.	6.1	6.1	*
<b>Cigarette</b>			
Total RTD, mm of H <sub>2</sub> O	111	106	66
Static Burn. Time, min.	6.8	7.3	7.8
Length, mm	98.3	98.3	98.7
Circumference, mm	24.1	24.1	24.9
<b>Filter</b>			
Type	CA	CA	CA
Inner	-	-	-
Outer	-	-	-
RTD, mm of H <sub>2</sub> O	129	128	98
Length, mm	31.4	31.4	27.1
Weight, g	0.18	0.19	0.20
Fiber denier/shape	2.8/Y	3.2/Y	3.8/Y
Inner	-	-	-
Outer	-	-	-
Tipping Paper			
Length, mm	36.0	36.0	36.0
Color	White	Cork	Cork
Ventilation, %	52	53	74
<b>Filler</b>			
Total alkaloids, % (DMB)	2.11	2.22	2.13
Total red. sugars, % (DMB)	7.0	9.4	6.3
Reconstituted Tob., %	22	22	14
Expanded Stems, %	3	None	7
Expanded Tob., %	19	21	11
Wt. of Tob., g (12.5% OV)	0.708	0.675	0.862
Rod Length, mm	66.9	65.9	71.6
Rod Density, g/cc	0.229	0.218	0.245

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

\*The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and Kool Ultra cigarette smoke deliveries. Data are given on page XII.

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**LOW TAR 100 MM FILTER CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>True</u>	<u>Vantage</u>	<u>Kent Golden Lights</u>	<u>Ritz (Box)</u>
<sup>1</sup> Sales	0.90	1.99	0.85	0.07
<b>Smoke</b>				
FTC Tar, mg/cigrt.	7.9	9.0	9.0	9.3
Nicotine, mg/cigrt.	0.70	0.66	0.79	0.75
Puffs/cigrt.	9.4	8.9	9.2	8.9
Filtration Eff., %	51	58	52	55
Filler Rod TPM, mg/cigrt.	28.7	26.8	28.9	26.8
CO, mg/cigrt.	7.9	10.6	8.2	8.8
<b>Cigarette</b>				
Total RTD, mm of H <sub>2</sub> O	59	138	99	123
Static Burn, Time, min.	6.5	6.8	6.7	6.6
Length, mm	98.8	99.4	99.1	98.2
Circumference, mm	24.9	25.0	24.9	24.2
<b>Paper</b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	2.4	1.0	2.2	0.5
Permeability, ml/cm <sup>2</sup> x min.	29	39	28	38
<b>Filter</b>				
Type	-	CA	CA	CA
Inner	CA	-	-	-
Outer	PL	-	-	-
RTD, mm of H <sub>2</sub> O	70	120	86	103
Length, mm	26.9	27.5	26.9	31.0
Weight, g	0.16	0.30	0.15	0.19
Fiber denier/shape	-	2.6/Y	3.1/Y	4.0/Y
Inner	1.8/Y	-	-	-
Outer	-	-	-	-
Tipping Paper				
Length, mm	34.0	34.0	34.0	35.0
Color	White	Cork	White	White
Ventilation, %	55	36	45	33
<b>Filler</b>				
Total alkaloids, % (DMB)	3.36	1.87	2.34	2.05
Total red. sugars, % (DMB)	5.2	6.0	7.7	7.4
Reconstituted Tob., %	20	24	22	24
Expanded Stems, %	None	None	None	None
Expanded Tob., %	14	20	11	16
Wt. of Tob., g (12.5% OV)	0.818	0.771	0.817	(0.694)
Rod Length, mm	71.9	71.9	72.2	67.2
Rod Density, g/cc	0.230	0.216	0.229	(0.222)

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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2031438367

**LOW TAR 100 MM FILTER CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>Winston</u> <u>Morit</u>	<u>Winston</u> <u>Item (Box)</u>	<u>Camel</u> <u>Lights</u>	<u>Winston</u> <u>Lights</u>
<b>Sales</b>	2.79	0.32	0.97	4.40
<b>Smoke</b>				
FTC Tar, mg/cigrt.	10.0	10.4	10.6	10.6
Nicotine, mg/cigrt.	0.81	0.72	0.75	0.76
Puffs/cigrt.	9.9	9.3	9.0	9.3
Filtration Eff., %	60	60	56	57
Filler Rod TPM, mg/cigrt.	28.8	28.2	27.1	27.5
CO, mg/cigrt.	10.1	11.4	11.7	10.9
<b>Cigarette</b>				
Total RTD, mm of H <sub>2</sub> O	117	150	117	121
Static Burn. Time, min.	7.8	7.3	7.2	7.3
Length, mm	99.6	98.1	98.6	98.7
Circumference, mm	25.0	24.2	25.0	25.0
<b>Paper</b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.6	0.6	0.5
Permeability, ml/cm <sup>2</sup> x min.	44	38	37	38
<b>Filter</b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	105	122	95	96
Length, mm	31.4	31.0	30.7	30.8
Weight, g	0.19	0.19	0.18	0.18
Fiber denier/shape	2.6/Y	3.1/Y	2.6/Y	2.6/Y
<b>Tipping Paper</b>				
Length, mm	36.0	35.0	35.0	35.0
Color	Cork	Cork	Cork	Cork
Ventilation, %	32	20	28	27
<b>Filler</b>				
Total alkaloids, % (DMB)	2.12	1.79	1.79	1.80
Total red. sugars, % (DMB)	6.6	7.3	6.8	6.9
Reconstituted Tob., %	22	24	24	24
Expanded Stems, %	3	None	None	None
Expanded Tob., %	12	16	16	16
Wt. of Tob., g (12.5g OV)	0.804	0.740	0.772	0.774
Rod Length, mm	68.2	67.2	68.2	67.9
Rod Density, g/cc	0.238	0.236	0.228	0.230

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**LOW TAR 100 MM FILTER CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

<b>B &amp; W</b> <b>Its. (Box)</b>	<b>Marlboro</b> <b>Its. (Box)</b>
---------------------------------------	--------------------------------------

0.21	0.12	3.76
10.7	10.8	11.0
0.85	0.88	0.88
9.4	8.8	10.1
51	53	59
26.9	27.1	30.1
10.2	1.6	11.1

123	121	120
7.4	6.7	8.1
98.4	99.0	98.5
24.1	24.9	25.0

Cit.	Cit.	Cit.
0.4	2.0	0.6
45	30	33

CA	CA	CA
103	88	107
31.6	26.9	31.4
0.19	0.15	0.19
2.6/Y	2.6/Y	3.0/Y
36.0	34.0	36.0
White	White	White
28	26	28

2.10	2.35	2.13
7.1	7.1	7.4
22	22	22
3	None	3
12	11	12
0.746	0.816	0.798
66.0	72.1	67.1
0.242	0.230	0.240

**Sales**

**Smoke**

FTC Tar, mg/cig.
Nicotine, mg/cig.
Puffs/cig.
Filtration Eff., %
Filler Rod TPM, mg/cig.
CO, mg/cig.

**Cigarette**

Total RTD, mm of H <sub>2</sub> O
Static Burn. Time, min.
Length, mm
Circumference, mm

**Paper**

Component Type
Component Percent
Permeability, ml/cm <sup>2</sup> x min.

**Filter**

Type
RTD, mm of H <sub>2</sub> O
Length, mm
Weight, g
Fiber denier/shape
Tipping Paper
Length, mm
Color
Ventilation, %

**Filler**

Total alkaloids, % (DMB)
Total red. sugars, % (DMB)
Reconstituted Tob., %
Expanded Stems, %
Expanded Tob., %
Wt. of Tob., g (12.5% OV)
Rod Length, mm
Rod Density, g/cc

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**LOW TAR 100 MM FILTER CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>B&amp;W Lights</u>	<u>Marlboro Lights</u>	<u>Kent</u>
<sup>1</sup> Sales	1.89	7.30	1.32
<b>Smoke</b>			
FTC Tar, mg/cig.	11.1	11.2	12.7
Nicotine, mg/cig.	0.88	0.89	0.93
Puffs/cig.	10.2	10.3	9.4
Filtration Eff., %	98	99	90
Filler Rod TPM, mg/cig.	31.5	30.4	28.5
CO, mg/cig.	11.0	11.3	12.0
<b>Cigarette</b>			
Total RTD, mm of H <sub>2</sub> O	122	124	121
Static Burn. Time, min.	7.8	8.0	6.9
Length, mm	99.5	99.5	98.6
Circumference, mm	25.0	24.9	24.9
<b>Paper</b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.6	0.5	0.8
Permeability, ml/cm <sup>2</sup> x min.	34	37	38
<b>Filter</b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	107	108	72
Length, mm	31.2	31.4	26.7
Weight, g	0.19	0.19	0.16
Fiber denier/shape	2.6/Y	2.6/Y	4.6/Y
Tipping Paper			
Length, mm	36.0	36.0	34.0
Color	White	White	White
Ventilation, %	30	29	20
<b>Filler</b>			
Total alkaloids, % (DMS)	2.12	2.13	2.04
Total red. sugars, % (DMS)	7.1	7.1	6.3
Reconstituted Tob., %	22	22	22
Expanded Stems, %	3	3	None
Expanded Tob., %	12	12	11
Wt. of Tob., g (12.5% CV)	0.808	0.812	0.844
Rod Length, mm	68.3	68.1	71.8
Rod Density, g/cc	0.238	0.241	0.238

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**LOW TAR 100 MM FILTER CIGARETTES**  
 (15 MG TAR OR LESS)  
 (Brands Ranked by FTC Tar, left to right)

Raleigh  
Light      I. G. M.      Raleigh

0.21	0.20	0.74
12.8	12.8	14.3
0.96	1.00	0.92
9.4	8.1	8.3
58	48	47
30.3	24.2	25.0
13.4	12.9	14.6

136	121	124
7.3	6.5	6.6
99.0	98.5	98.8
24.9	24.7	24.9

Cit.	Cit.	Cit.
0.9	1.5	0.3
46	120*	44

CA	CA	CA
102	68	64
29.9	29.7	26.7
0.18	0.17	0.15
3.8/Y	3.6/Y	3.8/Y
36.0	35.0	32.0
Cork	White	Cork
16	None	None

2.07	2.22	2.07
6.9	7.8	6.3
16	15	11
5	9	14
Mean	23	12
0.844	0.716	0.802
69.1	69.8	72.1
0.248	0.214	0.226

SalesSmoke

FTC Tar, mg/cig.  
 Nicotine, mg/cig.  
 Puffs/cig.  
 Filtration Eff., %  
 Filter Rod TPM, mg/cig.  
 CO, mg/cig.

Cigarette

Total RTD, mm of H<sub>2</sub>O  
 Static Burn. Time, min.  
 Length, mm  
 Circumference, mm

Paper

Component Type  
 Component Percent  
 Permeability, ml/cm<sup>2</sup> x min.

Filter

Type  
 RTD, mm of H<sub>2</sub>O  
 Length, mm  
 Weight, g  
 Fiber denier/shape  
 Tipping Paper  
 Length, mm  
 Color  
 Ventilation, %

Filter

Total alkaloids, % (DWB)  
 Total red. sugars, % (DWB)  
 Reconstituted Tob., %  
 Expanded Stems, %  
 Expanded Tob., %  
 Wt. of Tob., g (12.5% OV)  
 Rod Length, mm  
 Rod Density, g/cc

\*These cigarette papers are perforated.

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**FULL FLAVORED 100 MM FILTER CIGARETTES  
(16 MG TAR OR MORE)  
(Brands Ranked by FTC Tar, left to right)**

	<u>B &amp; H</u>	Winston	Marlboro	Pall Mall
<u>Sales</u>	3.09	5.02	6.45	1.71
<u>Smoke</u>				
FTC Tar, mg/cigrt.	15.7	16.1	16.5	16.6
Nicotine, mg/cigrt.	1.15	0.98	1.19	1.21
Puffs/cigrt.	10.4	9.6	10.7	9.9
Filtration Eff., %	50	52	50	47
Filler Rod TPM, mg/cigrt.	28.4	28.4	30.2	25.9
CO, mg/cigrt.	14.0	16.5	13.5	14.8
<u>Cigarette</u>				
Total RTD, mm of H <sub>2</sub> O	115	130	119	138
Static Burn. Time, min.	7.8	7.2	7.7	7.6
Length, mm	99.4	99.4	99.7	99.8
Circumference, mm	24.9	25.0	24.9	24.5
<u>Paper</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.6	0.5	0.6	0.9
Permeability, ml/cm <sup>2</sup> x min.	45	23	32	46
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	75	76	77	69
Length, mm	27.4	27.5	27.5	26.7
Weight, g	0.16	0.17	0.16	0.16
Fiber denier/shape	31.6/Y	3.6/Y	3.7/Y	4.2/Y
Tipping Paper				
Length, mm	32.0	32.0	31.5	32.0
Color	White	Cork	Cork	White
Ventilation, %	14	8	12	None
<u>Filler</u>				
Total alkaloids, % (DWB)	2.10	1.74	2.09	2.15
Total red. sugars, % (DWB)	6.7	7.3	7.3	8.4
Reconstituted Tob., %	22	24	22	20
Expanded Stems, %	3	None	3	3
Expanded Tob., %	12	16	12	11
Wt. of Tob., g (12.5% OV)	0.062	0.013	0.058	0.083
Rod Length, mm	72.1	72.0	72.3	73.1
Rod Density, g/cc	0.242	0.227	0.241	0.254

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**120 MM FILTER CIGARETTES**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>Carlton</u>	<u>Virginia Slims Lights (Box)</u>	<u>Saratoga (Box)</u>	<u>Moxie</u>
<u>Sales</u>	0.43	1.22	0.54	1.45
<u>Smoke</u>				
FTC Tar, mg/cig.	5.5	13.2	14.9	17.3
Nicotine, mg/cig.	0.51	1.02	1.17	1.24
Puffs/cig.	11.7	12.6	13.0	12.5
Filtration Eff., %	43	51	52	49
Filler Rod TPM, mg/cig.	19.5	27.3	29.4	33.0
CO, mg/cig.	4.0	12.8	12.8	20.9
<u>Cigarette</u>				
Total RTD, mm of H <sub>2</sub> O	100	134	133	166
Static Burn. Time, min.	6.4	7.5	7.8	8.4
Length, mm	119.6	119.7	119.8	119.8
Circumference, mm	22.3	23.0	23.1	21.1
<u>PARSE</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.9	0.9	0.9	0.4
Color	White	White	White	Brown
Permeability, ml/cm <sup>2</sup> x min.	45	43	26	19
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	84	100	96	119
Length, mm	29.6	31.5	31.6	35.0
Weight, g	0.14	0.16	0.16	0.16
Fiber denier/shape	4.0/Y	3.4/Y	3.0/Y	4.7/Y
Tipping Paper				
Length, mm	35.0	36.0	36.0	38.0
Color	White	White	Cork	Brown
Ventilation, %	63	28	28	31
<u>Filler</u>				
Total alkaloids, % (DMB)	2.32	2.11	2.13	1.99
Total red. sugars, % (DMB)	6.0	7.3	7.3	6.7
Reconstituted Tob., %	20	22	22	24
Expanded Stems, %	None	3	3	None
Expanded Tob., %	34	12	12	16
Wt. of Tob., g (12.5% OV)	0.781	0.914	0.917	0.720
Rod Length, mm	89.9	88.2	88.2	84.8
Rod Density, g/cc	0.219	0.246	0.244	0.240

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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2031438373

**ULTRA LOW TAR 100 MM FILTER MENTHOL CIGARETTES**  
**(6 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>Now</u>	<u>Salem</u> <u>Ultra Lights</u>	<u>Merit</u> <u>Ultra Lights</u>
<b>Sales</b>	0.99	1.76	0.47
<b>Smoke</b>			
FTC Tar, mg/cig.	3.3	5.4	5.4
Nicotine, mg/cig.	0.26	0.42	0.49
Puffs/cig.	7.3	9.4	10.5
Filtration Eff., %	68	67	66
Filler Rod TPM, mg/cig.	22.5	26.9	27.7
CO, mg/cig.	3.3	6.5	6.9
<b>Cigarette</b>			
Total RTD, mm of H <sub>2</sub> O	102	114	104
Static Burn. Time, min.	5.3	6.8	7.6
Length, mm	98.9	98.8	99.4
Circumference, mm	25.1	25.0	24.9
<b>Paper</b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	1.6	2.0	0.9
Permeability, ml/cm <sup>2</sup> x min.	26	25	27
<b>Filter</b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	138	152	135
Length, mm	31.0	31.0	31.9
Weight, g	0.21	0.22	0.20
Fiber denier/shape	2.9/Y	2.5/Y	3.0/Y
Tipping Paper			
Length, mm	35.0	35.0	36.0
Color	White	White	Cork
Ventilation, %	68	57	59
<b>Filler</b>			
Total alkaloids, % (DWB)	2.39	1.98	2.24
Total red. sugars, % (DWB)	4.6	8.6	5.8
Reconstituted Tob., %	15	24	22
Expanded Stems, %	None	None	None
Expanded Tob., %	53	16	21
Wt. of Tob., g (12.5% OV)	(0.572)	(0.769)	0.737
Rod Length, mm	67.9	67.8	67.9
Rod Density, g/cc	(0.168)	(0.228)	0.220
<b>Menthol, mg/cig.</b>			
Smoke	0.32	0.29	0.47
Filler	4.5	3.3	4.0
Filter	3.2	2.0	2.5

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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2031438374

ULTRA LOW TAR 100 MM FILTER MENTHOL CIGARETTES  
(6 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

B & W  
Dolune Ultra  
Lights (Box)

Kool Ultra\*

1.72 0.29

5.5 \*  
0.43 \*  
9.1 \*  
62 57  
23.3 24.1  
6.1 \*

119 57  
6.8 6.6  
98.4 98.0  
24.1 24.9

Cit. Cit.  
1.1 0.9  
46 47

CA CA  
141 86  
31.4 27.0  
0.19 0.20  
3.0/Y 4.0/Y  
  
36.0 36.0  
White Cork  
88 60

2.08 2.25  
6.8 6.5  
22 13  
3 10  
19 11  
0.721 0.818  
67.1 71.7  
0.233 0.231

0.41 0.22  
3.5 2.9  
1.9 1.4

Sales

Smoke

FTC Tar, mg/cig.  
Nicotine, mg/cig.  
Puffs/cig.  
Filtration Eff., %  
Filler Rod TPM, mg/cig.  
CO, mg/cig.

Cigarette

Total RTD, mm of H<sub>2</sub>O  
Static Burn. Time, min.  
Length, mm  
Circumference, mm

PARAF

Component Type  
Component Percent  
Permeability, ml/cm<sup>2</sup> x min.

Filter

Type  
RTD, mm of H<sub>2</sub>O  
Length, mm  
Weight, g  
Fiber denier/shape  
Tipping Paper  
Length, mm  
Color  
Ventilation, %

Filler

Total alkaloids, % (DWB)  
Total red. sugars, % (DWB)  
Reconstituted Tob., %  
Expanded Stems, %  
Expanded Tob., %  
Wt. of Tob., g (12.5% OV)  
Rod Length, mm  
Rod Density, g/cc

Menthol, mg/cig.

Smoke  
Filler  
Filter

\*The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and Kool Ultra cigarette smoke deliveries. Data are given on page XII.

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2031438375

**LOW TAR 100 MM FILTER MENTHOL CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>Salem</u> <u>Lights</u>	<u>Belair</u>	<u>True</u>	<u>Kool</u> <u>Lights</u>
<sup>1</sup> Sales	4.36	0.69	0.49	0.41
<u>Ana</u>				
FTC Tar, mg/cig.	8.2	8.3	8.6	8.6
Nicotine, mg/cig.	0.69	0.69	0.73	0.75
Puffs/cig.	9.3	8.8	9.2	9.2
Filtration Eff., %	60	49	50	57
Filler Rod TPM, mg/cig.	27.8	23.1	27.1	29.1
CO, mg/cig.	8.6	8.0	8.6	8.9
<u>Cigarette</u>				
Total RTD, mm of H <sub>2</sub> O	119	106	87	118
Static Burn. Time, min.	6.8	6.6	6.4	7.1
Length, mm	98.0	98.7	98.8	98.0
Circumference, mm	23.0	24.9	25.0	24.9
<u>Paper</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.3	0.3	2.1	0.3
Permeability, ml/cm <sup>2</sup> x min.	39	43	29	22
<u>Filter</u>				
Type	CA	CA	-	CA
Inner	-	-	CA	-
Outer	-	-	PL	-
RTD, mm of H <sub>2</sub> O	119	77	69	102
Length, mm	31.0	30.0	26.8	28.8
Weight, g	0.19	0.17	0.16	0.17
Fiber density/shape	2.4/Y	3.6/Y	-	3.4/Y
Inner	-	-	1.8/Y	-
Outer	-	-	-	-
<u>Tipping Paper</u>				
Length, mm	35.0	36.0	34.0	36.0
Color	white	white	white	Cork
Ventilation, %	41	37	33	38
<u>Filler</u>				
Total alkaloids, % (DMB)	2.02	1.95	2.31	2.19
Total red. sugars, % (DMB)	7.3	6.4	5.9	7.0
Reconstituted Tob., %	24	11	20	13
Expanded Stems, %	None	14	None	10
Expanded Tob., %	16	12	14	11
Wt. of Tob., g (12.5% OV)	0.740	0.772	0.817	0.794
Rod Length, mm	67.9	68.8	72.1	70.0
Rod Density, g/cc	0.219	0.228	0.229	0.230
<u>Menthol, mg/cig.</u>				
Smoke	0.38	0.31	0.44	0.32
Filler	2.9	2.1	3.0	2.6
Filter	1.4	1.2	1.0	1.5

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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2031438376

LOW TAR 100 MM FILTER MENTHOL CIGARETTES  
(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

<u>Vantage</u>	<u>Newport Lights</u>	<u>Merit</u>	<u>Kent Golden Lights</u>	
0.21	0.23	0.49	0.10	<u>Sales</u>
8.9	8.9	9.2	9.2	<u>Smoke</u>
0.65	0.82	0.78	0.82	FTC Tar, mg/cig.
8.6	9.0	9.6	9.2	Nicotine, mg/cig.
62	53	58	54	Puffs/cig.
26.9	28.0	28.0	27.8	Filtration Eff., %
10.8	6.9	10.6	8.9	Filler Rod TPH, mg/cig.
				CO, mg/cig.
138	102	118	108	<u>Cigarette</u>
6.5	6.8	6.8	6.5	Total RTD, mm of H <sub>2</sub> O
99.1	98.7	99.4	99.8	Static Burn. Time, min.
25.0	24.9	24.8	24.9	Length, mm
				Circumference, mm
Cit.	Cit.	Cit.	Cit.	<u>Paper</u>
0.9	2.0	1.9	2.1	Component Type
39	32	47	30	Component Percent
				Permeability, ml/cm <sup>2</sup> x min.
CA	CA	CA	CA	<u>Filter</u>
-	-	-	-	Type
-	-	-	-	Inner
132	86	109	87	Outer
31.0	26.8	31.5	26.8	RTD, mm of H <sub>2</sub> O
0.33	0.16	0.19	0.19	Length, mm
2.4/Y	2.8/Y	3.2/Y	3.0/Y	Weight, g
-	-	-	-	Fiber denier/shape
-	-	-	-	Inner
35.0	34.0	36.0	34.0	Outer
Cork	Cork	Cork	White	Tipping Paper
32	42	34	41	Length, mm
				Color
				Ventilation, %
1.80	2.28	2.11	2.30	<u>Filler</u>
7.3	7.7	6.1	8.1	Total alkaloids, % (DWB)
24	22	22	22	Total red. sugars, % (DWB)
None	None	3	None	Reconstituted Tob., %
16	11	12	11	Expanded Stems, %
0.751	0.826	0.803	0.824	Expanded Tob., %
68.1	71.8	67.9	72.0	Wt. of Tob., g (12.54 OV)
0.221	0.233	0.242	0.233	Rod Length, mm
				Rod Density, g/cc
0.37	0.33	0.54	0.40	<u>Menthol, mg/cig.</u>
3.0	2.3	3.4	2.5	Smoke
1.9	1.2	2.2	1.2	Filler
				Filter

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**LOW TAR 100 MM FILTER MENTHOL CIGARETTES**  
**(15 MG TAR OR LESS)**  
**(Brands Ranked by FTC Tar, left to right)**

	Marlboro Lights (Box)	B & H Lights (Box)	B & H Lights
<b>Sales</b>	0.40	0.19	1.67
<b>Smoke</b>			
FTC Tar, mg/cig.	9.7	10.4	10.4
Nicotine, mg/cig.	0.78	0.78	0.85
Puffs/cig.	9.2	8.6	10.2
Filtration Eff., %	54	51	57
Filler Rod TPM, mg/cig.	28.0	26.0	30.6
CO, mg/cig.	10.2	10.9	10.1
<b>Cigarette</b>			
Total RTD, mm of H <sub>2</sub> O	123	119	117
Static Burn. Time, min.	7.9	7.2	7.7
Length, mm	98.4	98.3	99.6
Circumference, mm	23.0	24.1	24.9
<b>Filter</b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.6	1.6	0.4
Permeability, ml/cm <sup>2</sup> x min.	48	50	46
<b>Filter</b>	CA	CA	CA
Type	103	102	107
RTD, mm of H <sub>2</sub> O	31.4	31.4	31.4
Length, mm	0.19	0.19	0.19
Weight, g	3.9/Y	3.3/Y	2.6/Y
Fiber denser/shape			
Tipping Paper			
Length, mm	36.0	36.0	36.0
Color	White	White	White
Ventilation, %	26	28	32
<b>Filler</b>			
Total alkaloids, % (DWB)	2.18	2.07	2.08
Total red. sugars, % (DWB)	8.0	6.5	7.0
Reconstituted Tob., %	22	22	22
Expanded Stems, %	None	3	3
Expanded Tob., %	15	12	12
Wt. of Tob., g (12.5% OV)	0.774	0.753	0.813
Rod Length, mm	67.0	66.9	68.2
Rod Density, g/cc	0.232	0.244	0.241
<b>Menthol, mg/cig.</b>			
Smoke	0.53	0.56	0.60
Filler	2.8	3.1	3.5
Filter	2.1	1.5	2.5

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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LOW TAR 100 MM FILTER MENTHOL CIGARETTES  
(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

<u>Rating</u>	<u>Ritz (Box)</u>	<u>Salem</u>	
0.08	0.10	3.59	<u>Sales</u>
10.8	11.1	15.3	<u>Smoke</u>
0.92	0.81	1.10	FTC Tar, mg/cig.
8.5	9.2	9.7	Nicotine, mg/cig.
50	52	48	Puffs/cig.
28.0	27.5	28.8	Filtration Eff., %
10.8	11.6	13.5	Filler Rod TPM, mg/cig.
			CO, mg/cig.
118	118	109	<u>Cigarette</u>
6.7	7.6	7.2	Total RTD, mm of H <sub>2</sub> O
98.8	98.3	99.4	Static Burn. Time, min.
25.0	24.2	25.0	Length, mm
			Circumference, mm
Cit.	Cit.	Cit.	<u>Paper</u>
1.8	0.9	0.5	Component Type
29	37	26	Component Percent
			Permeability, ml/cm <sup>2</sup> x min.
CA	CA	CA	<u>Filter</u>
85	96	70	Type
26.8	30.9	27.2	RTD, mm of H <sub>2</sub> O
0.15	0.18	0.16	Length, mm
2.6/Y	4.2/Y	3.5/Y	Weight, g
34.0	35.0	32.0	Fiber denier/shape
White	White	White	Tipping Paper
26	28	20	Length, mm
			Color
			Ventilation, %
2.34	1.81	2.01	<u>Filler</u>
6.9	6.7	7.4	Total alkaloids, % (DWB)
22	24	24	Total red. sugars, % (DWB)
None	None	None	Reconstituted Tob., %
11	16	16	Expanded Stems, %
0.024	(0.732)	0.829	Expanded Tob., %
72.0	67.4	72.2	Wt. of Tob., g (12.5t OV)
0.231	(0.233)	0.230	Rod Length, mm
			Rod Density, g/cc
0.39	0.67	0.45	<u>Menthol, mg/cig.</u>
2.3	3.7	2.3	Smoke
1.3	1.9	1.1	Filler
			Filter

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FULL FLAVORED 100 MM FILTER MENTHOL CIGARETTES  
 (16 MG TAR OR MORE)  
 (Brands Ranked by FTC Tar, left to right)

	<u>B &amp; H</u>	<u>Kool</u>	<u>Newport</u>
<u>Sales</u>	3.36	3.55	2.22
<u>Smoke</u>			
FTC Tar, mg/cig.	15.7	16.0	17.3
Nicotine, mg/cig.	1.16	1.21	1.26
Puffs/cig.	10.3	9.7	8.8
Filtration Eff., %	51	48	45
Filter Rod TPM, mg/cig.	29.3	26.9	30.0
CO, mg/cig.	13.4	15.8	16.6
<u>Cigarette</u>			
Total RTD, mm of H <sub>2</sub> O	119	123	125
Static Burn. Time, min.	7.9	7.0	7.3
Length, mm	99.4	98.9	98.8
Circumference, mm	24.9	24.9	24.9
<u>Filter</u>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.4	0.7
Permeability, ml/cm <sup>2</sup> x min.	47	45	20
<u>Filter</u>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	74	69	63
Length, mm	27.2	26.6	26.8
Weight, g	0.16	0.15	0.17
Fiber denier/shape	3.7/Y	3.8/Y	4.6/Y
Tipping Paper			
Length, mm	32.0	32.0	34.0
Color	White	Cork	Cork
Ventilation, %	12	None	None
<u>Filler</u>			
Total alkaloids, % (DWB)	2.09	2.49	2.30
Total Red. sugars, % (DWB)	7.1	6.3	7.8
Reconstituted Tab., %	22	19	22
Expanded Stems, %	3	10	None
Expanded Tab., %	12	11	11
Wt. of Tab., g (12.5% OV)	0.855	0.812	0.826
Rod Length, mm	72.2	72.2	72.0
Rod Density, g/cc	0.239	0.228	0.232
<u>Menthol, mg/cig.</u>			
Smoke	0.69	0.46	0.47
Filler	3.0	2.2	1.9
Filter	1.4	1.0	1.0

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**120 MM FILTER MENTHOL CIGARETTES**  
 (Brands Ranked by FTC Tar, left to right)

	<u>Carlton</u>	<u>Virginia Slims</u> <u>Light</u> <u>(Box)</u>	<u>Saratoga</u> <u>(Box)</u>	<u>Maze</u>
<sup>1</sup> Sales	0.42	0.91	0.25	1.23
<b>Smoke</b>				
FTC Tar, mg/cig.	5.6	13.6	14.7	17.0
Nicotine, mg/cig.	0.54	1.03	1.11	1.27
Puffs/cig.	11.4	12.6	13.2	12.3
Filtration Eff., %	43	51	50	49
Filler Rod TPM, mg/cig.	20.1	26.5	26.9	33.0
CO, mg/cig.	4.8	11.8	13.9	19.4
<b>Cigarette</b>				
Total RTD, mm of H <sub>2</sub> O	89	130	139	160
Static Burn. Time, min.	5.9	7.8	7.2	8.1
Length, mm	119.6	119.4	119.1	119.7
Circumference, mm	22.3	23.1	23.0	21.1
<b>Paper</b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.9	0.3	0.5	0.9
Color	White	White	White	Brown
Permeability, ml/cm <sup>2</sup> x min.	51	45	34	15
<b>Filter</b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	84	98	102	118
Length, mm	29.8	31.5	31.5	35.0
Weight, g	0.15	0.16	0.16	0.16
Fiber denier/shape	4.8/Y	3.6/Y	3.0/Y	4.8/Y
Tipping Paper				
Length, mm	38.0	36.0	36.0	39.0
Color	White	White	Cork	Brown
Ventilation, %	67	28	28	32
<b>Filler</b>				
Total alkaloids, % (DMB)	2.34	2.07	2.10	2.17
Total red. sugars, % (DMB)	5.6	7.2	6.9	7.1
Reconstituted Tob., %	20	22	22	24
Expanded Stems, %	None	3	3	None
Expanded Tob., %	34	12	12	16
Wt. of Tob., g (12.5% OV)	0.759	0.917	0.923	0.716
Rod Length, mm	89.8	87.9	87.6	84.7
Rod Density, g/cc	0.213	0.246	0.250	0.239
<b>Menthol, mg/cig.</b>				
Smoke	0.50	0.63	0.60	0.63
Filler	4.8	3.3	3.4	2.7
Filter	1.5	1.8	1.3	0.9

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**100 NM FILTER SLIM CIGARETTES**  
 (Brands Ranked by FTC Tar, left to right)

	<u>Virginia</u> <u>Slims Ultra</u> <u>Lights (Box)</u>	<u>Virginia</u> <u>Slims</u> <u>Lights (Box)</u>	<u>Capri</u> <u>(Box)</u>	<u>More</u> <u>Lights</u> <u>(Box)</u>	<u>Virginia</u> <u>Slims</u>
<u>Sales:</u>	1.05	1.02	1.00	0.21	1.95
<u>Smoke:</u>					
FTC Tar, mg/cig.	6.0	8.3	9.3	10.1	14.0
Nicotine, mg/cig.	0.49	0.70	0.76	0.76	1.02
Puffs/cig.	9.4	9.6	9.1	9.2	9.8
Filtration Eff., %	58	54	31	50	45
Filler Rod TPM, mg/cig.	25.6	26.4	21.5	26.3	26.2
CO, mg/cig.	5.7	7.6	5.7	9.5	11.1
<u>Cigarette:</u>					
Total RTD, mm of H <sub>2</sub> O	113	117	144	116	122
Static Burn. Time, min.	6.8	7.1	7.4	7.4	7.6
Length, mm	98.7	98.8	97.1	98.0	99.6
Circumference, mm	23.0	23.1	17.2	22.8	23.1
<u>Filter:</u>					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.3	1.0	0.6
Permeability, ml/cm <sup>2</sup> x min.	48	45	26	39	46
<u>Filler:</u>					
Type	CA	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	141	117	111	102	83
Length, mm	31.5	31.5	26.9	30.8	27.5
Weight, g	0.17	0.17	0.08	0.19	0.19
Fiber denier/shape	3.9/Y	3.1/Y	5.7/Y	3.4/Y	3.5/Y
Tipping Paper:					
Length, mm	36.0	36.0	32.0	38.0	32.0
Color	White	White	White	Deep Tan	White
Ventilation, %	57	40	53	40	17
<u>Filler:</u>					
Total alkaloids, % (DMS)	2.09	2.08	2.14	1.92	2.13
Total red. sugars, % (DMS)	6.7	6.9	6.8	6.0	6.8
Reconstituted Tob., %	22	22	19	24	22
Expanded Stems, %	3	3	None	None	3
Expanded Tob., %	19	12	None	16	12
Wt. of Tob., g (12.5% OV)	0.657	0.684	0.436	0.649	0.738
Rod Length, mm	67.1	67.3	70.2	67.2	72.1
Rod Density, g/cc	0.232	0.239	0.265	0.234	0.242

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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100 MM FILTER SLIM MENTHOL CIGARETTES  
(Brands Ranked by FTC Tar, left to right)

	Virginia Slims Lts. Lbs. (Box)	Salem Ultra Slims Lts. (Box)	Capri Lts. (Box)	Virginia Slims Lts. (Box)	More Lights (Box)	Virginia Slims
<sup>1</sup> Sales	0.90	1.68	0.87	2.02	0.18	1.62
<u>Smoke</u>						
FTC Tar, mg/cig.	5.6	8.9	8.9	8.9	9.0	14.4
Nicotine, mg/cig.	0.46	0.69	0.71	0.72	0.66	1.04
Puffs/cig.	8.9	8.4	9.2	9.4	8.9	9.8
Filtration Eff., %	58	50	31	54	48	44
Filler Rod TPM, mg/cig.	25.0	24.6	18.4	25.4	25.8	26.4
CO, mg/cig.	4.9	8.9	5.5	7.7	10.3	12.3
<u>Cigarette</u>						
Total RTD, mm of H <sub>2</sub> O	107	116	162	120	104	124
Static Burn. Time, min.	6.7	6.8	7.3	7.2	7.5	7.2
Length, mm	98.6	98.0	97.2	98.6	97.9	99.5
Circumference, mm	23.0	22.7	17.1	23.1	22.7	23.1
<u>Paper</u>						
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	2.3	0.8	0.3	0.4	0.9	0.4
Permeability, ml/cm <sup>2</sup> x min.	45	39	25	45	35	43
<u>Filter</u>						
Type	CA	CA	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	130	98	113	114	100	80
Length, mm	31.5	30.8	26.9	31.5	30.8	27.5
Weight, g	0.17	0.15	0.07	0.17	0.15	0.15
Fiber denier/shape	3.3/Y	3.4/Y	5.7/Y	3.2/Y	3.2/Y	3.4/Y
Tipping Paper						
Length, mm	36.0	35.0	32.0	36.0	35.0	32.0
Color	White	White	White	White	Deep Tan	White
Ventilation, %	56	38	52	38	42	18
<u>Filler</u>						
Total alkaloids, % (DMB)	2.04	1.97	1.92	2.10	1.81	2.08
Total red. sugars, % (DMB)	6.8	7.6	6.3	7.0	6.9	7.1
Reconstituted Tob., %	22	24	11	22	24	22
Expanded Stems, %	3	None	None	3	None	3
Expanded Tob., %	19	20	None	12	16	12
Wt. of Tob., g (12.5% OVI)	0.656	0.635	0.432	0.684	(0.639)	1.748
Rod Length, mm	67.0	67.3	70.3	67.1	67.2	72.0
Rod Density, g/cc	0.231	0.231	0.264	0.240	(0.232)	0.245
<u>Menthol, mg/cig.</u>						
Smoke	0.41	0.56	0.64	0.56	0.59	0.64
Filler	3.2	3.2	2.9	3.2	3.1	2.8
Filter	2.0	1.7	0.9	1.8	1.5	1.2

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**85 MM CHARCOAL FILTER CIGARETTES**  
 (Brands Ranked by FTC Tax, left to right)

	Tareyton Lights	B & H Multifilter	Lark Lights	Tareyton
<sup>1</sup> Sales	0.07	0.13	0.24	1.28
<u>Smoke</u>				
FTC Tax, mg/cigrt.	5.0	11.5	11.7	12.9
Nicotine, mg/cigrt.	0.43	0.87	0.91	0.90
Puffs/cigrt.	7.2	9.2	6.9	8.5
Filtration Eff., %	54	48	46	52
Filler Rod TPM, mg/cigrt.	23.3	32.1	23.8	26.9
Gas Phase Smoke Index, t Reduction	59	44	22	21
CO, mg/cigrt.	5.3	10.4	9.6	14.0
<u>Cigarette</u>				
Total RTD, mm of H <sub>2</sub> O	95	89	108	125
Static Burn. Time, min.	6.2	8.4	6.6	7.0
Length, mm	84.8	83.9	84.3	83.1
Circumference, mm	25.0	24.9	24.8	25.0
<u>Paper</u>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.8	0.6	0.8	0.8
Permeability, ml/cm <sup>2</sup> x min.	45	30	183**	49
<u>Filter</u>				
Type	-	-	-	-
Inner	C in Paper	C-CA	CA	C in Paper
Outer	CA	CA-PL	CA	CA
RTD, mm of H <sub>2</sub> O	76	70	66	59
Length, mm	27.0	25.1	24.7	20.0
Weight, g	0.20	0.34	0.17	0.17
Fiber denier/shape	-	-	-	-
Inner	-	3.4/I	3.6/Y	-
Outer	3.0/Y	3.2/Y	3.8/Y	4.2/Y
Carbon, mg/plug	9	35	52	34
Tipping Paper				
Length, mm	32.0	33.0	30.0	24.0
Color	Cork	White	Cork	Cork
Ventilation, t	46	29	None	None
<u>Tobacco</u>				
Total alkaloids, t (DMS)	2.14	1.84	2.18	2.12
Total red. sugars, t (DMS)	6.6	5.9	7.8	8.7
Reconstituted Tob., t	20	22	15	20
Expanded Stems, t	3	3	9	3
Expanded Tob., t	41	12	23	17
Wt. of Tob., g (12.5% OV)	0.575	0.698	0.616	0.769
Rod Length, mm	57.8	58.8	59.7	65.1
Rod Density, g/cc	0.199	0.241	0.211	0.237

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

\*Space containing carbon granules.

\*\*These cigarettes are perforated.

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**100 MM CHARCOAL FILTER CIGARETTES**  
 (Brands Ranked by FTC Tax, left to right)

	<u>Tareyton</u> <u>Long Lights</u>	<u>Parliament</u> <u>Lights</u>	<u>Lark</u> <u>Lights</u>	<u>Tareyton</u>
<sup>1</sup> Sales	0.15	1.37	0.18	1.17
<b>Smoke</b>				
FTC Tax, mg/cig.	8.1	11.7	12.3	13.1
Nicotine, mg/cig.	0.69	0.99	0.98	0.95
Puffs/cig.	10.6	10.0	8.4	9.5
Filtration Eff., %	58	56	48	59
Filler Rod TPM, mg/cig.	25.3	30.0	22.5	24.8
Gas Phase Smoke Index,				
<sup>2</sup> Reduction	53	49	25	27
CO, mg/cig.	8.3	11.1	10.9	15.0
<b>Cigarette</b>				
Total RTD, mm of H <sub>2</sub> O	109	115	122	146
Static Burn. Time, min.	6.9	8.3	6.7	7.2
Length, mm	99.8	99.6	98.7	99.8
Circumference, mm	24.9	24.9	24.7	24.9
<b>Paper</b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.9	0.5	0.6	1.1
Permeability, ml/cm <sup>2</sup> x min.	48	46	185**	47
<b>Filter</b>				
Type	-	-	-	-
Inner	C in Paper	C-CA	CA	C in Paper
Outer	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	91	109	74	70
Length, mm	26.8	20.0 <sup>3</sup>	29.7	26.8
Weight, g	0.22	0.22	0.18	0.20
Fiber denier/shape	-	-	-	-
Inner	-	4.8/X	3.9/X	-
Outer	3.2/Z	3.2/Z	3.0/Z	4.7/Z
Carbon, mg/plug	0	52	48	33
Tipping Paper				
Length, mm	32.0	36.0	35.0	32.0
Color	Cork	White	Cork	Cork
Ventilation, %	45	38	None	None
<b>Filler</b>				
Total alkaloids, % (DMB)	2.17	2.11	2.20	2.20
Total red. sugars, % (DMB)	8.0	6.4	8.0	7.9
Reconstituted Tob., %	20	22	18	20
Expanded Stems, %	9	3	5	3
Expanded Tob., %	17	12	23	17
Wt. of Tob., g (12.5% OV)	0.839	0.813	0.716	0.846
Rod Length, mm	72.9	69.6	68.9	73.1
Rod Density, g/cc	0.233	0.236	0.215	0.236

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

<sup>2</sup>The reported value includes the recessed portion.

<sup>3</sup>Space containing carbon granules.

<sup>\*\*</sup>These cigarette papers are perforated.

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**80 MM FILTER CIGARETTES (BOX)**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>Camel Lights</u>	<u>Winston Lights</u>	<u>Parliament Lights</u>	<u>Kent</u>	<u>Winston Marlboro</u>	
<sup>1</sup> Sales	0.87	0.64	1.30	0.09	1.56	25.07
<b>Smoke</b>						
FTC Tar, mg/cig.	8.9	9.1	9.1	11.0	15.5	15.8
Nicotine, mg/cig.	0.59	0.59	0.76	0.81	0.95	1.12
Puffs/cig.	7.3	7.0	7.6	8.0	7.8	8.7
Filtration Eff., %	59	58	54	52	49	45
Filler Rod TPM, mg/cig.	29.8	30.5	30.1	26.8	28.3	32.0
CO, mg/cig.	9.9	10.0	8.8	11.2	13.9	12.9
<b>Cigarette</b>						
Total RTD, mm of H <sub>2</sub> O	146	147	117	135	120	105
Static Burn. Time, min.	7.3	7.6	7.6	7.1	7.6	8.2
Length, mm	78.9	79.1	79.1	79.7	78.8	79.2
Circumference, mm	25.1	25.0	24.9	24.9	25.0	25.0
<b>Param</b>						
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.4	0.4	0.6	0.6	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	26	23	49	36	38	27
<b>Filter</b>						
Type	CA	CA	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	118	117	118	88	69	68
Length, mm	19.0	18.9	24.8 <sup>2</sup>	20.9	19.0	19.0
Weight, g	0.14	0.14	0.13	0.14	0.13	0.12
Fiber denier/shape	2.7/Y	2.0/Y	2.4/Y	2.8/Y	2.6/Y	3.1/Y
Tipping Paper						
Length, mm	27.0	27.0	30.0	25.0	23.0	23.0
Color	Cork	Cork	White	White	Cork	Cork
Ventilation, %	20	20	29	21	None	10
<b>Filler</b>						
Total alkaloids, % (DMB)	1.77	1.77	2.14	2.04	1.89	2.05
Total red. sugars, % (DMB)	7.0	7.3	6.8	6.2	6.7	7.4
Reconstituted Tob., %	24	24	22	22	24	22
Expanded Stems, %	None	None	3	None	None	3
Expanded Tob., %	16	16	12	11	16	12
Wt. of Tob., g (12.5% OV)	(0.650)	0.654	0.628	0.696	0.697	0.714
Rod Length, mm	59.9	60.2	54.3	58.7	59.8	60.2
Rod Density, g/cc	(0.217)	0.219	0.234	0.241	0.235	0.239

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

<sup>2</sup>The reported value includes the recessed portion.

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## NON-FILTER CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	Camel	Commander Regular	Lucky Strike	Chesterfield King	Pall Mall	Commander King	King Size
<sup>1</sup> Sales	4.65	0.03	1.17	0.75	7.77	0.23	
<u>Smoke</u>							
FTC Tar, mg/cig.	20.0	20.9	23.6	20.4	22.5	23.8	
Nicotine, mg/cig.	1.31	1.34	1.48	1.38	1.49	1.57	
Puffs/cig.	6.8	7.4	8.2	8.8	9.9	8.9	
Filler Rod TPM, mg/cig.	31.0	30.7	35.3	26.3	27.9	30.5	
CO, mg/cig.	11.6	10.7	13.8	11.4	13.1	11.9	
<u>Cigarette</u>							
Total RTD, mm of H <sub>2</sub> O	63	54	69	78	78	58	
Static Burn. Time, min.	7.7	8.3	10.0	7.3	7.9	7.4	
Length, mm	68.9	70.1	69.0	84.1	84.0	84.0	
Circumference, mm	25.0	24.9	25.0	25.0	24.9	25.0	
<u>Paper</u>							
Component Type	Cit.	Cit.	Phos.	Cit.	Cit.	Cit.	
Component Percent	0.5	0.6	0.1	0.7	0.7	1.9	
Permeability, ml/cm <sup>2</sup> x min.	24	46	17	47	32	48	
<u>Filler</u>							
Total alkaloids, % (DMS)	2.21	2.12	2.06	2.05	2.10	2.09	
Total red. sugars, % (DMS)	7.3	8.9	10.3	10.6	10.1	9.1	
Reconstituted Tob., %	15	18	20	10	20	18	
Expanded Stems, %	None	3	3	5	3	3	
Expanded Tob., %	16	13	11	18	11	13	
Wt. of Tob., g (12.5% OV)	(0.772)	0.830	0.880	0.962	1.043	0.977	
Rod Density, g/cc	(0.224)	0.240	0.256	0.231	0.252	0.234	

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**35 MM: BRANDED GENERICS**  
**(Brands Ranked by FTC Tax, left to right)**

	Doral Ultra Lights Lights	Century 25's	Magna Lites (Box)	Malibu Lights	Doral Lights
<sup>1</sup> Sales	1.13	0.24	0.42	0.20	2.01
<b>Smoke</b>					
FTC Tax, mg/cigrt.	5.5	8.7	8.8	8.8	9.7
Nicotine, mg/cigrt.	0.46	0.68	0.62	0.75	0.73
Puffs/cigrt.	8.5	7.8	7.1	8.1	7.1
Filtration Eff., %	62	57	60	49	54
Filler Rod TPM, mg/cigrt.	31.9	28.3	30.1	28.5	29.0
CO, mg/cigrt.	6.2	10.4	11.6	8.6	10.2
<b>Cigarette</b>					
Total RTD, mm of H <sub>2</sub> O	96	140	146	102	104
Static Burn. Time, min.	81.6	7.7	7.1	7.3	7.3
Length, mm	84.1	83.1	78.7	82.9	83.0
Circumference, mm	25.0	24.2	25.0	25.0	25.0
<b>Paper</b>					
Component Type	Phos.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.2	0.3	0.4	0.8	0.4
Permeability, ml/cm <sup>2</sup> x min.	26	24	22	45	26
<b>Filter</b>					
Type	CA	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	117	124	118	87	85
Length, mm	26.8	24.4	19.1	24.9	26.8
Weight, g	0.17	0.16	0.14	0.18	0.16
Fiber denier/shape	3.0/Y	2.5/Y	2.2/Y	4.0/Y	3.1/Y
Tipping Paper					
Length, mm	31.0	27.0	27.0	30.0	31.0
Color	White	Cork	White	White	Cork
Ventilation, %	60	30	22	36	26
<b>Tobacco</b>					
Total alkaloids, % (DWB)	2.08	1.94	1.84	1.95	2.17
Total red. sugars, % (DWB)	6.7	6.3	6.6	6.8	6.9
Reconstituted Tob., %	24	24	24	20	24
Expanded Stems, %	None	None	None	None	None
Expanded Tob., %	25	20	16	12	25
Wt. of Tob., g (12.5% OV)	0.604	0.628	0.646	0.689	0.597
Rod Length, mm	57.3	58.7	59.6	58.0	57.0
Rod Density, g/cc	0.211	0.229	0.219	0.239	0.210

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**85 MM BRANDED GENERICS**  
**(Brands Ranked by FTC Tar, left to right)**

<u>Chesterfield</u> <u>Lights</u>	<u>Richland</u> <u>Lights</u> <u>25's</u>	<u>Players</u> <u>Lights</u> <u>25's</u>	<u>Magna</u> <u>Lites</u>	<u>Viceroy</u> <u>Lights</u>	
0.05	0.34	0.12	0.48	0.52	<u>Sales</u>
9.9	10.3	10.5	10.3	11.0	<u>Smoke</u>
0.83	0.82	0.81	0.76	0.88	FTC Tar, mg/cig.
7.0	7.9	8.6	7.3	8.1	Nicotine, mg/cig.
53	55	58	59	58	Puffs/cig.
26.7	32.9	30.4	31.8	31.3	Filtration Eff., %
11.6	11.3	11.0	10.8	11.0	Filler Rod TPM, mg/cig.
					CO, mg/cig.
133	134	119	115	132	<u>Cigarette</u>
7.4	8.0	7.7	7.3	8.0	Total RTD, mm of H <sub>2</sub> O
84.2	84.1	84.0	83.9	83.7	Static Burn. Time, min.
24.7	24.6	24.9	25.1	25.0	Length, mm
					Circumference, mm
Cit.	Cit.	Cit.	Cit.	Cit.	<u>PARAF</u>
0.7	0.5	0.4	0.6	0.7	Component Type
26	35	39	34	30	Component Percent
					Permeability, ml/cm <sup>2</sup> x min.
CA	CA	CA	CA	CA	<u>Filter</u>
92	103	101	87	103	Type
24.9	26.9	26.9	26.9	26.9	RTD, mm of H <sub>2</sub> O
0.15	0.17	0.17	0.17	0.17	Length, mm
3.0/Y	2.8/Y	2.8/Y	2.3/Y	2.5/Y	Weight, g
33.0	32.0	31.0	31.0	32.0	Fiber denier/shape
Cork	White	White	White	Cork	Tipping Paper
22	20	27	15	21	Length, mm
					Color
					Ventilation, %
2.04	2.06	2.05	1.85	2.13	<u>Filler</u>
8.3	7.3	7.1	6.9	6.6	Total alkaloids, % (DWB)
15	16	22	24	16	Total red. sugars, % (DWB)
5	5	3	None	5	Reconstituted Tob., %
23	None	15	16	None	Expanded Stems, %
0.621	0.707	0.664	0.644	0.730	Expanded Tob., %
59.3	57.2	57.2	57.0	56.8	Wt. of Tob., g (12.5g OV)
0.216	0.257	0.235	0.225	0.259	Rod Length, mm
					Rod Density, g/cc

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**85 MM BRANDED GENERICS**  
 (Brands: Ranked by FTC Tar, left to right)

	<u>Cambridge Lights</u>	<u>American Lights</u>	<u>Magna</u>	<u>Magna (Box)</u>	<u>Doral Full Flavor (Box)</u>
<sup>1</sup> Sales	1.32	0.38	0.61	0.56	-
<b>Smoke</b>					
FTC Tar, mg/cig.	11.3	11.6	12.8	13.3	13.5
Nicotine, mg/cig.	0.88	0.91	0.89	0.84	0.76
Puffs/cig.	81.4	81.6	61.9	61.5	71.1
Filtration Eff., %	52	51	51	44	47
Filler Rod TPM, mg/cig.	33.2	31.6	26.0	26.6	28.7
CO, mg/cig.	10.7	11.5	12.9	12.6	17.7
<b>Cigarette</b>					
Total RTD, mm of H <sub>2</sub> O	111	123	119	120	152
Static Burn. Time, min.	8.3	8.6	6.7	6.4	7.7
Length, mm	84.1	82.9	84.0	79.0	79.0
Circumference, mm	24.9	25.0	25.0	24.9	24.8
<b>Filter</b>					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.8	0.4	0.6	0.2
Permeability, ml/cm <sup>2</sup> x min.	25	28	24	40	21
<b>Filler</b>					
Type	CA	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	88	87	79	69	83
Length, mm	27.0	25.0	21.0	19.0	19.1
Weight, g	0.17	0.17	0.14	0.13	0.13
Fiber denier/shape	3.0/Y	3.0/Y	3.4/Y	3.4/Y	2.4/Y
Tipping Paper					
Length, mm	31.0	30.0	25.0	23.0	23.0
Color	Cork	White	Cork	Cork	Cork
Ventilation, %	23	21	7	None	None
<b>Filler</b>					
Total alkaloids, % (DMS)	2.06	2.01	2.12	2.03	2.10
Total red. sugars, % (DMS)	7.4	8.1	6.5	6.4	6.5
Reconstituted Tob., %	22	20	24	24	24
Expanded Stems, %	3	None	None	None	None
Expanded Tob., %	15	12	25	25	25
Wt. of Tob., g (12.5% OV)	0.670	0.731	0.619	0.627	0.626
Rod Length, mm	57.1	57.9	63.0	59.9	59.9
Rod Density, g/cc	0.238	0.254	0.198	0.211	0.214

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**85 MM: BRANDED GENERICS**  
(Brands: Ranked by FTC Tar, left to right)

<u>Pyramid Lights</u>	<u>Doral Full Flavor</u>	<u>Century 25's</u>	<u>Malibu</u>	<u>American Filters</u>
0.32	1.30	0.21	0.17	0.20
14.0	14.2	14.3	15.0	15.7
11.07	1.02	0.94	1.12	1.14
7.8	7.6	7.0	9.6	9.7
48	46	46	41	41
28.8	30.7	35.5	31.1	29.3
12.0	13.6	16.3	12.6	14.5
				<sup>1</sup> Sales
				<u>Smoke</u>
				FTC Tar, mg/cig.
				Nicotine, mg/cig.
				Puffs/cig.
				Filtration %, %
				Filler Rod TPM, mg/cig.
				CO, mg/cig.
				<u>Cigarette</u>
				Total RTD, mm of H <sub>2</sub> O
117	114	147	113	114
7.9	7.3	8.4	8.1	7.9
83.8	83.9	82.9	84.7	84.9
24.7	25.0	24.1	25.0	24.8
				<u>TABAC</u>
Cit.	Phos.	Phos.	Cit.	Cit.
0.5	0.1	0.2	0.8	0.9
143*	26	26	48	46
				<u>Filter</u>
CA	CA	CA	CA	CA
63	69	91	60	56
24.8	21.0	23.0	20.2	20.0
0.14	0.12	0.14	0.14	0.13
4.4/Y	4.5/Y	2.6/Y	4.5/Y	4.5/Y
30.0	29.0	27.0	24.0	24.0
Cork	Cork	Cork	Cork	Cork
None	7	None	13	13
				<u>Filler</u>
2.10	2.12	2.03	1.97	1.99
6.4	6.6	6.4	8.9	9.4
15	24	24	20	20
5	None	None	None	None
23	25	25	12	12
0.629	0.665	0.646	0.834	0.809
59.0	62.9	60.0	64.5	64.9
0.220	0.213	0.233	0.261	0.255

\*These cigarette papers are perforated.

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**6. 9. BRANDED GENERICS**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>Cambridge</u> <u>Full Flavor</u>	<u>Richland</u> <u>25's</u>	<u>Viceroy</u>	<u>Pyramid</u> <u>(MF)</u>
<sup>1</sup> Sales	0.97	0.68	2.22	0.32
<b>Smoke</b>				
FTC Tar, mg/cig.	15.9	16.1	17.1	21.2
Nicotine, mg/cig.	1.10	1.13	1.24	1.35
Puffs/cig.	0.5	0.6	0.9	0.4
Filtration Eff., %	47	46	47	-
Filter Rod TPM, mg/cig.	30.1	28.9	31.7	28.9
CO, mg/cig.	13.3	13.9	13.6	10.8
<b>Cigarette</b>				
Total RTD, mm of H <sub>2</sub> O	116	130	115	73
Static Burn. Time, min.	7.9	7.8	7.3	7.7
Length, mm	84.1	84.0	83.9	84.0
Circumference, mm	24.9	24.8	25.0	24.9
<b>Filter</b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.4	0.4	0.4	0.6
Permeability, ml/cm <sup>2</sup> x min.	41	25	29	44
<b>Tipping Paper</b>				
Type	CA	CA	CA	-
RTD, mm of H <sub>2</sub> O	68	77	74	-
Length, mm	21.0	21.0	21.0	-
Weight, g	0.12	0.13	0.13	-
Fiber denier/shape	2.6/Y	2.6/Y	3.9/Y	-
<b>Filler</b>				
Total alkaloids, % (DWB)	2.04	2.09	2.09	2.04
Total red. sugars, % (DWB)	7.1	6.8	6.8	10.5
Reconstituted Tob., %	22	14	12	10
Expanded Stems, %	3	7	7	5
Expanded Tob., %	15	11	11	18
Wt. of Tob., g (12.5g OV)	0.736	0.773	0.728	0.955
Rod Length, mm	63.1	63.0	62.9	84.0
Rod Density, g/cc	0.236	0.251	0.233	0.230

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**85 MM MENTHOL BRANDED GENERICS**  
 (Brands Ranked by FTC Tar, left to right)

	Alpine Lights	Players Lights 25's	Doral Lights	Cambridge Lights
<sup>1</sup> Sales	0.92	0.06	0.96	0.48
<b>Smoke</b>				
FTC Tar, mg/cig.	9.4	9.4	9.5	12.1
Nicotine, mg/cig.	0.72	0.74	0.68	0.92
Puffs/cig.	7.8	8.4	7.4	8.3
Filtration Eff., %	52	55	54	53
Filler Rod TPM, mg/cig.	27.5	33.3	27.4	31.3
CO, mg/cig.	10.1	9.8	9.6	11.6
<b>Cigarette</b>				
Total RTD, mm of H <sub>2</sub> O	111	119	92	112
Static Burn. Time, min.	8.3	8.0	7.1	8.0
Length, mm	83.7	83.9	83.8	84.0
Circumference, mm	24.9	25.0	25.0	24.9
<b>Paper</b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.4	0.5	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	38	41	26	27
<b>Filter</b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	89	104	87	89
Length, mm	26.9	26.9	26.9	27.0
Weight, g	0.16	0.17	0.16	0.17
Fiber denier/shape	3.0/Y	3.1/Y	3.1/Y	3.9/Y
Tipping Paper				
Length, mm	31.0	31.0	31.0	31.0
Color	White	White	Cork	White
Ventilation, %	26	29	35	22
<b>Filler</b>				
Total alkaloids, % (DWB)	2.13	2.02	1.83	2.07
Total red. sugars, % (DWB)	8.2	6.8	7.9	7.3
Reconstituted Tob., %	22	22	24	22
Expanded Stems, %	5	3	None	3
Expanded Tob., %	14	15	(20)	15
Wt. of Tob., g (12.5% OV)	0.657	0.664	(0.606)	0.670
Rod Length, mm	56.8	57.0	57.0	57.0
Rod Density, g/cc	0.234	0.233	(0.214)	0.238
<b>Menthol, mg/cig.</b>				
Smoke	0.55	0.50	0.42	0.61
Filler	2.5	2.5	2.1	2.5
Filter	1.9	1.7	1.7	1.6

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**85 MM MENTHOL BRANDED GENERICS**  
 (Brands Ranked by FTC Tax, left to right)

	<u>Richland</u> <u>25's</u>	<u>Alpine</u>	<u>Doral Full</u> <u>Flavor</u>	<u>Malibu</u>
<b>Sales</b>	0.28	0.35	0.35	0.19
<b>Smoke</b>				
FTC Tax, mg/cigrt.	14.9	15.1	15.4	15.4
Nicotine, mg/cigrt.	0.97	1.02	1.07	1.17
Puffs/cigrt.	7.1	8.2	7.7	10.1
Filtration Eff., %	41	44	47	40
Filler Rod TPM, mg/cigrt.	25.9	27.9	30.3	31.3
CO, mg/cigrt.	14.3	13.2	14.2	12.3
<b>Cigarette</b>				
Total RTD, mm of H <sub>2</sub> O	117	118	110	111
Static Burn. Time, min.	7.0	7.5	7.5	8.1
Length, mm	83.4	83.9	83.9	84.9
Circumference, mm	24.9	24.9	25.0	25.0
<b>Paper</b>				
Component Type	Cit.	Cit	Cit..	Cit.
Component Percent	0.7	0.5	0.4	0.8
Permeability, ml/cm <sup>2</sup> x min.	27	32	25	47
<b>Filter</b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	57	64	68	58
Length, mm	21.1	21.0	21.0	20.2
Weight, g	0.12	0.13	0.13	0.14
Fiber denier/shape	3.6/Y	3.4/Y	2.9/Y	4.0/Y
Tipping Paper				
Length, mm	26.0	25.0	25.0	24.0
Color	Cork	White	Cork	Cork
Ventilation, %	None	None	7	19
<b>Filler</b>				
Total alkaloids, % (DWB)	2.20	2.08	2.13	2.02
Total red. sugars, % (DWB)	6.8	8.4	7.2	9.2
Reconstituted Tob., %	14	22	24	20
Expanded Stems, %	7	5	None	None
Expanded Tob., %	11	14	25	12
Wt. of Tob., g (12.5g OV)	0.713	0.723	0.669	0.816
Rod Length, mm	62.3	62.8	63.0	64.7
Rod Density, g/cc	0.231	0.233	0.214	0.254
<b>Menthol, mg/cigrt.</b>				
Smoke	0.50	0.59	0.48	0.59
Filler	2.0	2.0	1.7	2.5
Filter	1.1	1.1	0.8	1.4

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**100 MM BRANDED GENERICS**  
 (Brands Ranked by FTC Tar, left to right)

	<u>Cambridge Ultra Lights</u>	<u>Doral Ultra Lights</u>	<u>Savvy Ultra Lights</u>	<u>Pyramid Ultra Lights</u>	<u>Malibu Ultra Lights</u>
<b>Sales</b>	1.33	0.80	0.05	0.32	-
<b>Smoke</b>					
FTC Tar, mg/cig.	4.9	5.3	5.6	5.9	6.2
Nicotine, mg/cig.	0.42	0.48	0.57	0.52	0.49
Puffs/cig.	10.3	10.1	9.4	9.4	9.4
Filtration Eff., %	68	66	53	53	60
Filler Rod TTM, mg/cig.	27.9	33.0	27.5	25.4	24.9
CO, mg/cig.	5.0	6.8	4.0	4.2	6.4
<b>Cigarette</b>					
Total RTD, mm of $\text{H}_2\text{O}$	108	104	77	73	124
Static Burn. Time, min.	7.7	7.7	7.2	6.6	7.1
Length, mm	99.0	98.7	98.9	98.7	99.5
Circumference, mm	25.0	25.0	24.7	24.9	24.4
<b>Filter</b>					
Component Type	Cit.	Phos.	Cit.	Cit.	Cit.
Component Percent	2.0	0.1	0.7	0.7	0.9
Permeability, ml/cm <sup>2</sup> x min.	48	25	28	28	49
<b>Filter</b>					
Type	CA	CA	CA	CA	CA
RTD, mm of $\text{H}_2\text{O}$	144	136	82	77	123
Length, mm	31.4	31.0	29.6	29.7	26.9
Weight, g	0.21	0.21	0.16	0.17	0.18
Fiber denier/shape	2.9/Y	3.2/Y	4.9/Y	3.4/Y	3.2/I
Tipping Paper					
Length, mm	36.0	35.0	35.0	35.0	35.0
Color	White	White	White	White	White
Ventilation, %	58	60	64	64	50
<b>Filler</b>					
Total alkaloids, % (DWB)	2.12	2.03	2.18	2.21	2.20
Total red. sugars, % (DWB)	7.2	7.1	8.2	8.3	7.6
Reconstituted Tob., %	22	24	15	15	24
Expanded Stems, %	3	None	5	5	None
Expanded Tob., %	15	25	23	23	24
Wt. of Tob., g (12.5% OV)	0.805	0.706	0.738	0.734	0.780
Rod Length, mm	67.7	67.7	69.3	68.9	72.7
Rod Density, g/cc	0.240	0.210	0.219	0.217	0.227

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**100 MM BRANDED GENERICS**  
**(Brands Ranked by FTC Tax, left to right)**

	Malibu Lights	Chesterfield Lights	Savvy Lights	Doral Lights	Century Lights 25's
<b>Sales</b>	0.84	0.05	0.05	2.99	0.91
<b>Smoke</b>					
FTC Tax, mg/cigrt.	9.1	10.1	10.2	11.4	11.5
Nicotine, mg/cigrt.	0.76	0.84	0.89	0.91	0.88
Puffs/cigrt.	10.6	8.6	8.6	9.4	8.4
Filtration Eff., %	57	54	48	51	53
Filler Rod TPM, mg/cigrt.	26.1	24.7	27.4	29.0	27.1
CO, mg/cigrt.	9.8	10.0	10.5	10.2	12.0
<b>Cigarette</b>					
Total RRD, mm of H <sub>2</sub> O	122	112	106	96	123
Static Burn. Time, min.	7.8	6.6	7.1	7.2	7.1
Length, mm	99.7	98.8	98.6	98.7	97.8
Circumference, mm	24.4	24.8	24.7	25.0	24.1
<b>Filter</b>					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.8	0.9	0.7	0.6	0.5
Permeability, ml/cm <sup>2</sup> x min.	44	31	31	25	24
Type	CA	CA	CA	CA	CA
RRD, mm of H <sub>2</sub> O	108	80	77	77	97
Length, mm	26.7	29.8	29.9	31.0	31.0
Weight, g	0.17	0.17	0.16	0.18	0.18
Fiber denier/shape	3.9/Y	4.0/Y	3.5/Y	3.6/Y	3.7/Y
Tipping Paper					
Length, mm	32.0	35.0	38.0	35.0	35.0
Color	White	Cork	White	Cork	Cork
Ventilation, %	38	33	34	33	24
<b>Filler</b>					
Total alkaloids, % (DMS)	2.05	2.25	2.08	2.16	2.12
Total red. sugars, % (DMS)	81.7	7.6	0.6	6.6	7.3
Reconstituted Tob., %	20	15	15	24	24
Expanded Stems, %	None	5	5	None	None
Expanded Tob., %	12	23	23	25	20
Wt. of Tob., g (12.5% OV)	0.826	0.725	0.735	0.725	0.704
Rod Length, mm	73.0	68.9	68.7	67.7	66.9
Rod Density, g/cc	0.239	0.215	0.220	0.216	0.227

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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**100 MM BRANDED GENERICS**  
(Brands Ranked by FTC Tar, left to right)

American Lights	Players Lights 21's	Cambridge Lights	Richland Lights 25's	Viceroy Lights	
0.58	0.33	1.94	0.47	0.55	<b>Sales</b>
11.6	11.7	12.1	12.5	12.6	<b>Smoke</b>
0.91	0.90	0.91	0.93	0.96	FTC Tar, mg/cig.
11.0	10.6	10.1	9.4	9.4	Nicotine, mg/cig.
52	60	59	57	58	Puffs/cig.
26.8	31.2	31.7	29.5	30.1	Filtration Eff., %
11.4	12.9	12.6	13.1	12.4	Filler Rod TPM, mg/cig.
					CO, mg/cig.
130	122	127	141	132	<b>Cigarette</b>
7.8	8.1	7.8	7.7	7.4	Total RTD, mm of H <sub>2</sub> O
99.6	99.4	99.5	99.1	98.8	Static Burn. Time, min.
24.5	24.9	25.0	24.9	24.9	Length, mm
					Circumference, mm
Cit.	Cit.	Cit.	Cit.	Cit.	<b>Paper</b>
1.0	0.9	0.6	0.7	1.1	Component Type
46	26	21	45	48	Component Percent
					Permeability, ml/cm <sup>2</sup> min.
CA	CA	CA	CA	CA	<b>Filter</b>
96	109	106	102	104	Type
26.7	31.5	31.4	26.8	29.8	RTD, mm of H <sub>2</sub> O
0.17	0.19	0.19	0.17	0.18	Length, mm
3.8/Y	2.8/Y	2.8/Y	3.2/Y	2.9/Y	Weight, g
32.0	36.0	36.0	36.0	36.0	Fiber denier/shape
White	White	Cork	White	Cork	Tipping Paper
29	28	26	16	17	Length, mm
					Color
					Ventilation, %
2.16	2.00	2.08	2.02	2.08	<b>Filler</b>
9.2	6.8	7.1	7.9	7.0	Total alkaloids, % (DWB)
20	22	22	16	16	Total red. sugars, % (DWB)
None	3	3	5	5	Reconstituted Tob., %
12	15	15	None	None	Expanded Stems, %
0.871	0.798	0.797	0.893	0.858	Expanded Tob., %
72.9	67.9	68.1	72.3	69.0	Wt. of Tob., g (12.5% OV)
0.251	0.239	0.235	0.250	0.252	Rod Length, mm
					Rod Density, g/cc

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**100 MM BRANDED GENERICS**  
**(Brands Ranked by FTC Tar, left to right)**

	<u>Pyramid Lights</u>	<u>Doral Full Flavor</u>	<u>Malibu</u>	<u>American Milds</u>
<sup>1</sup> Sales	0.32	1.85	0.43	0.20
<b>Smoke</b>				
FTC Tar, mg/cig.	13.4	14.9	15.1	15.4
Nicotine, mg/cig.	1.04	1.00	1.25	1.14
Puffs/cig.	0.3	0.1	11.1	10.1
Filtration Eff., %	52	53	46	46
Filler Rod TPM, mg/cig.	28.3	29.0	27.1	24.5
CO, mg/cig.	14.4	15.9	13.3	11.9
<b>Cigarette</b>				
Total RTD, mm of H <sub>2</sub> O	131	133	129	123
Static Burn. Time, min.	7.3	7.2	7.4	7.3
Length, mm	98.6	98.8	99.7	99.7
Circumference, mm	24.8	25.0	24.5	24.5
<b>Paper</b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.6	0.5	1.3	0.9
Permeability, ml/cm <sup>2</sup> x min.	77*	25	43	47
<b>Filter</b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	65	78	68	64
Length, mm	29.9	31.0	26.9	26.8
Weight, g	0.17	0.18	0.17	0.14
Fiber denier/shape	4.4/Y	4.5/Y	6.6/Y	4.5/Y
Tipping Paper				
Length, mm	35.0	35.0	32.0	32.0
Color	Cork	Cork	Cork	Cork
Ventilation, %	None	None	14	11
<b>Filler</b>				
Total alkaloids, % (DMS)	2.17	2.14	2.03	2.17
Total red. sugars, % (DMS)	8.7	6.6	9.1	8.4
Reconstituted Tob., %	15	24	20	20
Expanded Stems, %	5	None	None	None
Expanded Tob., %	23	25	12	12
Wt. of Tob., g (12.5% OV)	0.733	0.704	0.858	0.849
Rod Length, mm	68.7	67.8	72.8	72.8
Rod Density, g/cc	0.219	0.209	0.248	0.244

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

\*These cigarette papers are perforated.

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**100 MM BRANDED GENERICS**  
 (Brands Ranked by FTC Tax, left to right)

Century 25's	Cambridge Full Flavor	Richland 25's	Yicaret
0.65	1.25	0.75	1.17
13.8	16.0	16.5	17.9
1.03	1.18	1.23	1.30
8.3	8.6	10.6	10.6
55	49	51	51
34.2	20.6	33.4	34.0
19.6	14.9	15.6	14.4
143	113	125	111
8.2	7.3	8.1	8.0
97.8	99.3	99.1	98.8
24.1	25.0	24.9	24.9
Phos.	Cit.	Cit.	Cit.
0.2	1.7	0.5	0.5
24	44	23	24
CA	CA	CA	CA
98	61	76	78
31.0	31.4	26.8	26.6
0.18	0.18	0.15	0.15
3.8/Y	4.4/Y	3.2/Y	4.1/Y
35.0	36.0	32.0	32.0
Cork	Cork	Cork	Cork
12	None	16	16
2.04	2.10	2.13	2.10
7.0	7.7	7.2	6.4
24	22	16	12
None	3	5	7
16	15	None	11
0.712	0.785	0.887	0.847
66.7	67.9	72.3	72.2
0.230	0.233	0.230	0.238

**Sales**

**Smoke**

FTC Tax, mg/cig.;  
 Nicotine, mg/cig.;  
 Puffs/cig.;  
 Filtration Eff., %  
 Filter Rod TPM, mg/cig.;  
 CO, mg/cig.

**Cigarette**

Total RRD, mm of H<sub>2</sub>O  
 Static Burn. Time, min.  
 Length, mm  
 Circumference, mm

**PANAX**

Component Type  
 Component Percent  
 Permeability, ml/cm<sup>2</sup> x min.

**Filter**

Type  
 RRD, mm of H<sub>2</sub>O  
 Length, mm  
 Weight, g  
 Fiber denier/shape  
 Tipping Paper  
 Length, mm  
 Color  
 Ventilation, %

**Filler**

Total alkaloids, % (DWB)  
 Total red. sugars, % (DWB)  
 Reconstituted Tob., %  
 Expanded Stems, %  
 Expanded Tob., %  
 Wt. of Tob., g (12.5% OM)  
 Rod Length, mm  
 Rod Density, g/cc

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**100 MM MENTHOL BRANDED GENERICS**  
**(Brands Ranked by FTC Tar, left to right)**

	Doral Lights	Alpine Lights	Savvy Lights	Cambridge Lights	Players Lights 25's
<sup>1</sup> Sales	1.81	0.69	0.05	1.09	0.20
<b>Smoke</b>					
FTC Tar, mg/cigtr.	9.3	10.0	10.2	11.0	11.4
Nicotine, mg/cigtr.	0.69	0.78	0.90	0.89	0.90
Puffs/cigtr.	9.0	9.4	8.9	9.9	10.3
Filtration Eff., %	55	56	50	58	48
Filler Rod TPM, mg/cigtr.	28.9	28.1	26.5	31.8	30.5
CO, mg/cigtr.	11.7	10.7	9.4	11.0	12.9
<b>Cigarette</b>					
Total RTD, mm of H <sub>2</sub> O	119	125	109	128	127
Static Burn, Time, min.	7.2	7.8	7.1	8.0	8.6
Length, mm	99.0	99.4	99.6	99.6	99.5
Circumference, mm	25.0	25.0	24.6	25.0	24.9
<b>Partic</b>					
Component Type	Cit.	Cit.	Cit.	Cit.	Cit.
Component Percent	0.9	0.6	0.6	0.5	0.4
Permeability, ml/cm <sup>2</sup> x min.	26	30	34	27	28
<b>Filter</b>					
Type	CA	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	114	104	81	108	109
Length, mm	30.9	31.6	29.8	31.4	31.5
Weight, g	0.19	0.20	0.17	0.19	0.19
Fiber denier/shape	3.6/Y	3.0/Y	3.5/Y	2.8/Y	3.0/Y
Tipping Paper					
Length, mm	35.0	36.0	35.0	36.0	36.0
Color	Cork	White	White	White	White
Ventilation, %	32	28	37	27	27
<b>Filler</b>					
Total alkaloids, % (DWB)	1.80	2.06	2.11	2.07	2.03
Total red. sugars, % (DWB)	7.7	8.4	8.7	7.2	7.0
Reconstituted Tob., %	24	22	19	22	22
Expanded Stems, %	None	5	5	3	3
Expanded Tob., %	(20)	14	23	15	15
Wt. of Tob., g (12.5% CV)	(0.738)	0.785	0.733	0.806	0.813
Tob Length, mm	68.2	67.8	68.0	68.2	68.0
Tob Density, g/cc	(0.217)	0.234	0.221	0.238	0.242
<b>Menthol, mg/cigtr.</b>					
Smoke	0.49	0.56	0.40	0.60	0.70
Filler	3.0	2.9	1.9	3.4	3.5
Filter	1.8	2.0	1.1	2.0	1.8

<sup>1</sup>Third quarter sales in billions of cigarettes - Maxwell Report - October, 1989.

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100 MM MENTHOL BRANDED GENERICS  
(Brands Ranked by FTC Tar, left to right)

Malibu <u>Low Tax</u>	Pyramid <u>Lights</u>	Alpina	Doral <u>Full Flavor</u>
--------------------------	--------------------------	--------	-----------------------------

0.63	0.32	0.59	0.44
11.4	14.1	15.3	15.4
0.93	1.07	1.08	1.11
10.6	8.9	9.7	8.1
53	50	44	51
27.7	28.1	26.0	30.0
11.1	14.2	14.6	16.9

<sup>1</sup>Sales

Smoke

FTC Tar, mg/cig.
Nicotine, mg/cig.
Puffs/cig.
Filtration Eff., %
Filler Rod TPM, mg/cig.
CO, mg/cig.

127	125	115	125
7.4	6.7	7.6	7.3
99.5	98.1	99.5	98.8
24.5	24.7	24.8	24.9

Cigarette

Total RTD, mm of H <sub>2</sub> O
Static Burn. Time, min.
Length, mm
Circumference, mm

Cit.	Cit.	Cit.	Cit.
0.9	2.0	0.6	0.5
44	124*	48	25

Paper

Component Type
Component Percent
Permeability, ml/cm <sup>2</sup> x min.

CA	CA	CA	CA
92	69	63	80
26.0	29.6	27.5	30.9
0.17	0.17	0.17	0.18
3.8/Y	4.4/Y	4.5/Y	3.8/Y
32.0	35.0	32.0	35.0
White	White	White	Cork
30	None	10	None

Filter

Type
RTD, mm of H <sub>2</sub> O
Length, mm
Weight, g
Fiber denier/shape
Tipping Paper
Length, mm
Color
Ventilation, %

1.97	2.05	2.08	2.13
8.8	8.5	8.4	6.8
20	15	22	24
None	5	5	None
12	23	14	25
0.847	0.724	0.837	0.712
72.7	68.5	72.0	67.9
0.245	0.218	0.238	0.212

Filler

Total alkaloids, % (DWB)
Total red. sugars, % (DWB)
Reconstituted Tob., %
Expanded Stems, %
Expanded Tob., %
Wt. of Tob., g (12.5% OV)
Rod Length, mm
Rod Density, g/cc

0.69	0.42	0.63	0.47
4.0	2.0	2.5	1.9
2.1	1.1	1.3	0.9

Menthol, mg/cig.

Smoke
Filler
Filter

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**BLIND COMFORTS**  
**REACHES BY WEIGHT**

	<u>Reconstituted</u> <u>Tobacco</u>	<u>Expanded</u> <u>Stems</u>	<u>Expanded</u> <u>Tobacco</u>
<b>PHILIP MORRIS</b>			
Alpine 88, 100, Alpine Lights 88, 100	22	3	14
B & K 100 (plain & menthol)	22	3	13
B & K Lights 100 (plain & menthol)	22	3	13
B & K Multifilter 88 (plain)			
Marlboro 88, 85, 100			
Marlboro Lights 88, 100			
Merit 88, 100 (plain & menthol)			
Parliament Lights 88, 85, 100			
Saratoga 120 (plain & menthol)			
Va. Slims 100 (plain & menthol)			
Va. Slims Lights 100 (plain & men.)			
Va. Slims Lights 120 (plain & men.)			
Merit Ultra Lights 88, 100 (plain & men.)	22	None	21
Marlboro Menthol 88	22	None	13
Marlboro Lights Menthol 88, 100 (Box)			
B & K Deluxe Ultra Lts. 100 (plain & men.)	22	3	19
Va. Slims Ultra Lights 100 (plain & men.)			
Commander 70's 88 (MF)	18	3	13
Cambridge Ultra Lights 100	22	3	13
Cambridge Lights 88 & 100 (plain & men.)			
Cambridge Full Flavor 88 & 100			
Players Lights 88, 100 (plain & men.)			
<b>SCOTCH &amp; SODA</b>			
Barelay 88, 100	14	7	11
Richland 88 (plain & men.)			
Kool Milds 88, 85	13	10	11
Kool 88, 100			
Kool Lights 88, 100			
Kool Ultra 88, 100			
Belair 88, 100	11	14	12
Raleigh 88, 100			
Viceroy 88, 100	12	7	11
Raleigh Lights 88, 100	16	5	None
Richland Lights 88, 100			
Richland 100			
Viceroy Lights 88, 100			
Capri 100	19	None	None
Capri Menthol 100	11	None	None
<b>LORELLA</b>			
Kent 88, 85, 100	22	None	11
Kent Golden Lights 88, 100 (plain & men.)			
Newport 88, 100			
Newport Lights 88, 100			
Old Gold 88			
Satin 100 (plain & menthol)			
True 88, 100 (plain & menthol)	20	None	14
Kent III 88, 100	18	None	25

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BLEND COMPONENTS  
PERCENT BY WEIGHT

	<u>Reconstituted Tobacco</u>	<u>Expanded Tobacco</u>	<u>Expanded Tobacco</u>
<b>EXCELSIOR</b>			
Salem Ultra Lights 88	24	None	28
Century 88	24	None	25
Doral Full Flavor 88,88,100 (plain & ment.)			
Doral Lights 88,100			
Doral Ultra Lights 88,100			
Winston Ultra Lights 88,100			
Vantage Ultra Lights 88,100			
Magna 88,88			
Century Lights 88,100	24	None	28
Doral Lights Menth 88,100			
Salem Slim Lights 100			
Vantage 88,100			
Camel 88	24	None	16
Camel Lights 88,88,100			
Century 100			
Magna Lites 88,88			
Ment 120 (plain & menthol)			
Ment Lights 100 (plain & menthol)			
Ritz 100 (plain & menthol)			
Salem 88,100			
Salem Lights 88,100			
Salem Ultra Lights 100			
Vantage 88,100 Menth			
Winston 88,88,100			
Winston Lights 88,88,100			
Ment 88,100 (plain & menthol)	15	None	33
Camel 70 (WF)	15	None	16
<b>AMERICAN</b>			
Malibu Ultra Lights 100	24	None	24
Carlton 88,88,100 (plain & ment.)	20	None	46
Carlton 120 (plain & menthol)	20	None	34
American Filters 88,100	20	None	12
American Lights 88,100			
Lucky Strike 88			
Malibu 88,100 (plain & menthol)			
Malibu Lights 88,100			
Tareyton Lights 88	20	3	41
Tareyton 88,100	20	3	17
Tareyton Long Lights 100			
Lucky Strike 70 (WF)	20	3	11
Pall Mall 88 (WF)			
Pall Mall 100			
<b>LEXMARK</b>			
Chesterfield Lights 88,100	15	5	23
Lark Lights 88,100			
L & M 88,100			
Pyramid Lights 88,100, Men. 100			
Pyramid Ultra Lights 100			
Savvy Lights 100 (plain & ment.)			
Savvy Ultra Lights 100			
Chesterfield 88 (WF)	10	5	18
Pyramid 88 (WF)			

These data are based on the average values for the brands manufactured in January through December, 1989.

2031438403

## MINOR BRANDS

Brand	Cigts. Length, mm	FTC Tar, mg/cigst.	Nicotine, mg/cigst.	Puffs/ cigst.	CO, mg/cigst.
<b><u>FILTER - PLAIN</u></b>					
Now 80 (Box)	78.7	0.0	0.00	6.3	0.4
Kent Golden Lights 80 (Box)	79.0	7.9	0.69	6.8	8.6
L & M 80 (Box)	81.0	15.5	1.11	7.8	11.3
Camel 80 (Box)	79.1	15.5	1.00	7.8	14.1
Barclay 80 (Box)	80.0	*	*	*	*
Ultra Carlton 85 (Box)	83.0	0.0	0.00	6.1	0.0
Triumph 85	83.7	3.6	0.31	7.1	3.5
Lucky Strike Lights 85	83.0	8.2	0.67	8.1	8.4
Old Gold Lights 85	84.0	8.3	0.75	7.1	9.6
PLAYERS 85 (BOX)	83.1	11.8	0.90	8.2	11.8
Lucky Strike 85 (Box)	83.1	13.2	1.00	8.2	13.4
Pall Mall 85	84.9	14.2	1.06	9.3	13.6
B & W 85 (BOX)	84.5	14.8	1.27	9.6	12.3
Kent III 100 (Box)	98.9	5.2	0.46	8.3	7.3
Triumph 100	99.3	5.7	0.49	8.1	6.1
Kent Golden Lights 100 (Box)	98.8	9.5	0.86	9.0	9.5
Lucky Strike Lights 100	99.7	9.6	0.80	10.6	9.1
Pall Mall Lights 100	99.8	9.9	0.82	9.6	11.6
Silva Thins 100	98.7	12.6	1.03	9.5	11.4
Eve Slim Lights 100 (Box)	97.8	11.8	0.96	7.7	9.9
Lucky Strike 100	99.0	12.5	0.98	10.4	11.4
EX-LITE 100 (BOX)	98.6	12.5	1.06	10.9	12.9
PLAYERS 100 (BOX)	98.3	13.3	1.03	9.4	12.3
St. Moritz 85	99.0	13.5	1.07	8.6	15.1
MARLBORO 100 (BOX)	98.3	15.7	1.14	10.3	14.3
P.M. INTERNATIONAL 100 (BOX)	98.5	16.1	1.16	10.3	15.3
B & W (BOX)	98.5	16.1	1.18	10.2	14.4
Old Gold 100	98.7	18.0	1.42	8.7	16.3
Eve Lights 120 (Box)	119.6	12.6	1.11	13.6	11.4
Max 120	119.3	16.0	1.24	10.0	16.7
Tall 120	119.6	17.2	1.47	14.2	16.9
<b><u>FILTER - CHARCOAL</u></b>					
Lark 85	84.8	12.8	1.10	7.1	13.5
Lark 100	98.7	13.8	1.16	8.9	13.3

\*Filter Type: CA = Cellulose Acetate, C = Carbon

\*The FTC has determined that the present testing methodology does not accurately measure Brown & Williamson's Barclay and Kool Ultra cigarette smoke deliveries. Data are given on page XII.

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## MINOR BRANDS

Total RTD, mm of H <sub>2</sub> O	Ventila- tion, %	Circum- ference, mm	Permeability, ml/cm <sup>2</sup> min.	Color	Tipping Paper Length, mm	Filter Length, mm	Filter Type <sup>1</sup>
103	95	25.0	40	White	32.0	27.6	CA
102	32	25.1	29	White	30.0	25.0	CA
107	None	24.9	184**	White	26.0	21.1	CA
122	None	24.9	39	Cork	23.0	19.1	CA
47	82	24.9	25	Cork	32.0	27.0	CA
111	97	25.1	173**	White	36.0	32.2	CA
101	63	24.9	29	Cork	32.0	24.9	CA/CA
133	30	25.0	46	Cork	30.0	25.0	CA
102	36	25.0	29	Cork	32.0	24.9	CA
110	22	25.0	21	Cork	32.0	26.9	CA
123	14	25.0	28	Cork	30.0	25.1	CA
116	19	24.9	45	Cork	24.0	20.1	CA
111	23	24.8	33	White	30.0	25.0	CA
123	50	25.0	32	White	34.0	26.9	CA/CA
121	48	24.9	30	Cork	34.0	26.9	CA/CA
98	39	25.0	26	White	34.0	26.7	CA
124	37	24.5	46	Cork	32.0	26.9	CA
136	28	24.5	46	White	36.0	26.8	CA
122	23	22.7	26	White	32.0	31.8	CA
119	None	22.7	184**	White	35.0	29.8	CA
121	30	24.5	43	Cork	32.0	26.9	CA
119	26	24.8	46	Cork	31.5	27.4	CA
107	21	24.1	48	Cork	36.0	31.4	CA
109	None	25.0	101**	White	32.0	27.0	CA
116	13	25.0	42	Cork	31.7	27.5	CA
114	14	24.8	32	Cork	32.0	27.5	CA
117	13	24.9	35	White	32.0	27.4	CA
119	None	25.0	19	Cork	34.0	27.0	CA
108	56	21.1	11	White	35.0	29.8	CA
143	18	22.0	19	White	35.0	29.8	CA
108	45	22.3	14	White	35.0	29.8	CA
117	None	24.8	173**	Cork	30.0	25.0	CA/C/CA
117	None	24.7	173**	Cork	35.0	29.8	CA/C/CA

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## MINOR BRANDS

Brand	Cig. Length, mm	FTC Tar, mg/cig.	Nicotine, mg/cig.	Puffs/ Cig.	CO, mg/cig.	Smoke Menthол, mg/cig.
<b><u>FILTER - MENTHOL</u></b>						
Kool Menthol (MF)	70.2	19.7	1.31	6.5	12.7	0.62
Newport Lights Men. 80 (Box)	79.5	8.0	0.71	6.7	8.8	0.32
Kool Menthol 80 (Box)	79.9	14.7	1.00	7.1	13.4	0.53
Newport Menthol 80 (Box)	79.4	15.1	1.08	7.2	14.1	0.42
Triumph Menthol 85	84.0	3.9	0.35	6.8	5.3	0.26
PLAYERS MENTHOL 85 (BOX)	83.0	11.5	0.86	8.1	12.5	0.62
Newport Menthol 85 25's	84.4	15.7	1.14	7.8	15.8	0.47
Carlton Menthol 100 (Box)	98.6	1.0	0.1	8.4	0.8	0.14
Carlton Menthol 100	99.5	4.9	0.42	7.9	5.8	0.34
Triumph Menthol 100	98.9	5.6	0.47	8.1	6.9	0.36
Newport Lights Men. 100 (Box)	99.1	8.9	0.81	8.9	8.8	0.38
Silva Thins Menthol 100	99.8	10.6	0.91	9.4	9.7	0.41
Lucky Strike Menthol 100	99.5	11.0	0.89	9.9	11.3	0.70
Eve Slim Lights Men. 100 (Box)	97.6	11.4	0.93	7.7	9.5	0.40
Kool Milds Menthol 100	98.9	11.5	0.92	8.6	12.4	0.47
PLAYERS MENTHOL 100 (BOX)	98.4	13.3	1.01	9.2	12.3	0.72
Kent Menthol 100	99.2	13.4	0.98	8.9	13.9	0.43
St. Moritz Menthol 85	99.7	14.8	1.02	8.6	14.0	0.40
P.M. MENTH. MEN. 100 (BOX)	98.5	16.3	1.22	10.5	15.9	0.61
B & H MENTHOL (BOX)	98.7	16.8	1.18	10.6	13.5	0.63
Spring Menthol 100	99.1	17.7	1.37	8.6	18.4	0.48
Newport Menthol 100 25's	98.7	18.0	1.33	8.7	17.3	0.47
Eve Lights Menthol 120 (Box)	120.1	13.1	1.14	13.8	11.3	0.68
Max Menthol 120	119.4	16.2	1.24	9.9	17.1	0.53
Tall Menthol 120	119.6	18.4	1.57	15.8	16.5	0.77
<b><u>NON-FILTER</u></b>						
Chesterfield	68.9	17.6	1.14	6.8	9.8	-
PLAYERS (BOX)	70.2	23.2	1.68	9.5	12.6	-
Raleigh (MF)	83.9	22.0	1.30	8.3	13.7	-
H. Tareyton	83.8	22.8	1.50	8.9	15.3	-
ENGLISH OVALS (BOX)	84.3	23.2	1.79	10.8	12.9	-
Old Gold	84.5	23.8	1.68	8.8	15.8	-

<sup>1</sup>Filter Type: CA = Cellulose Acetate, C = Carbon

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## MINOR BRANDS

Total RTD, mm of H <sub>2</sub> O	Ventila- tion, %	Circum- ference, mm	Permeability, ml/cm <sup>2</sup> x min.	Color	Tipping Paper Length, mm	Filter Length, mm	Filter Type <sup>1</sup>
63	None	25.0	24	Cork	11.0	-	-
107	30	25.0	29	Cork	30.0	24.9	CA
121	None	25.0	32	Cork	23.0	19.0	CA
121	None	25.0	19	Cork	25.0	21.0	CA
105	58	25.0	25	Cork	32.0	25.0**	CA/CA
113	20	25.1	20	Cork	32.0	27.1	CA
121	None	24.8	18	Cork	25.0	21.0	CA
80	83	24.4	45	White	35.0	26.7	CA
117	56	24.4	29	White	35.0	26.7	CA
123	47	25.0	28	Cork	34.0	26.9	CA
102	41	25.0	31	Cork	34.0	26.8	CA
115	29	22.3	48	White	32.0	26.9	CA
123	31	24.6	50	Cork	32.0	27.0	CA
116	None	22.7	205*	White	35.0	29.9	CA
123	22	24.8	23	Cork	36.0	29.1	CA
106	22	24.3	48	Cork	36.0	31.4	CA
126	13	25.0	37	White	34.0	26.8	CA
104	None	25.1	173*	White	32.0	27.1	CA
118	12	24.9	32	Cork	32.0	27.5	CA
112	16	24.8	33	White	32.0	27.4	CA
116	None	25.0	16	Cork	34.0	27.0	CA
123	None	24.9	14	Cork	34.0	27.0	CA
106	57	21.2	10	White	35.0	29.9	CA
144	17	22.0	18	White	35.0	29.8	CA
136	36	22.4	15	White	35.0	29.8	CA
69	-	24.9	47	-	-	-	-
93	-	24.9	27	-	-	-	-
77	-	24.9	24	-	-	-	-
96	-	25.0	26	-	-	-	-
102	-	25.0	44	-	-	-	-
78	-	25.0	21	-	-	-	-

\*These cigarette papers are perforated.

\*\*Contains carbon.

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COUPON BRANDS

Two companies utilize coupons on their brands:

BROWN & WILLIAMSON<sup>1</sup>

Belair (85 & 100)  
Raleigh Filter (85 & 100)  
Raleigh Nonfilter (85)  
Raleigh Lights (85 & 100)

LIGGETT GROUP

Chesterfield Nonfilter (70 & 85)  
Chesterfield Filter 85

Philip Morris, American, Lorillard and Reynolds  
do not use coupons on any of their brands.

<sup>1</sup>These brands contain 2 coupons per pack and 8 coupons in the carton.

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~~CONFIDENTIAL~~

THE APPENDIX SECTION WHICH INCLUDES THE SUMMARY OF BRAND CHANGES, THE DESCRIPTION OF DATA REPORTED, AND EXPERIMENTAL PROCEDURES HAS BEEN UPDATED IN THIS REPORT.

PLEASE RETAIN THIS COPY FOR A REFERENCE AS THESE SECTIONS WILL NOT BE INCLUDED AGAIN UNTIL JULY, 1990. THIS WILL SAVE A CONSIDERABLE AMOUNT OF PAPER AND EFFORT BY NOT INCLUDING THE APPENDIX SECTION IN EACH MONTH'S REPORT.

THE SUMMARY OF COMPETITIVE BRAND CHANGES IS ARRANGED ALPHABETICALLY BY COMPANY. ALSO, THE BRANDS ARE LISTED ALPHABETICALLY FOR YOUR CONVENIENCE IN LOCATING A SPECIFIC BRAND.

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APPENDIXSUMMARY OF COMPETITIVE BRAND CHANGES OBSERVED SINCE APRIL, 1960A. AMERICAN BRANDSAMERICAN BRAND 10

85 mm - Test marketed in soft pack (85 mm) - No unusual characteristics.

4/72

Discontinued.

AMERICAN BRAND 15

85 mm - Test marketed in soft pack (85 mm) - No unusual characteristics.

4/71

Discontinued.

AMERICAN FILTERS 15

Test marketed in Illinois - This value entry brand delivers 16 mg tar and 1.1 mg nicotine - packaged in a red pack.

5/69

AMERICAN FILTERS 100

Test marketed in Illinois - This value entry brand delivers 16 mg tar and 1.1 mg nicotine - packaged in a red pack.

5/69

AMERICAN LIGHTS 15

Test marketed in St. Louis, Missouri. Delivers 12 mg tar and 0.9 mg nicotine. This is a value entry product.

9/68

AMERICAN LIGHTS 100

Test marketed in St. Louis, Missouri. Delivers 11 mg tar and 0.9 mg nicotine. This is a value entry product.

9/68

AMERICAN LIGHTS 100 MENTHOL

Distributed in Virginia - delivers 11 mg tar, 0.9 mg nicotine and 0.6 mg smoke menthol - branded generic.

11/69

AMERICAN LIGHTS 120

Plain - Introduced 120 mm cigarette with a 40 mm CA filter and a tipping paper length of 45 mm - Tar (8 mg) lower than any 120 mm entry to date.

4/76

Discontinued.

AMERICAN LIGHTS MENTHOL 120

Menthol - Introduced 120 mm cigarette with a 40 mm CA filter and a tipping paper length of 45 mm - Tar (9 mg) lower than any 120 mm entry to date.

4/76

Discontinued.

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AMERICAN LONGS 120

Plain - Introduced 120 mm cigarette with a white cigarette paper - 30 mm CA filter - Tar (19 mg) and nicotine (1.5 mg) deliveries.

9/75

Discontinued.

AMERICAN LONGS MENTHOL 120

Menthol - Introduced 120 mm cigarette with a white cigarette paper - 30 mm CA filter - Tar (16 mg) and nicotine (1.3 mg) deliveries.

9/75

Discontinued.

AMERICAN OVALS 100

100 mm cigarette with 25 mm CA filter made like a normal cigarette and pressed into its oval shape.

6/69

Discontinued.

BERMUDA 85

Test marketed - king size - 20 mm CA filter, high TPM, low RFD.

9/65

Discontinued.

BRIGHTON 85

Test marketed - king size - dual filtered mentholated - similar to Montclair.

4/63

Discontinued.

BRIGHTON CONVERTIBLE MENTHOL 100

Same as Tennyson Menthol 100 - Introduced in test market.

4/68

Discontinued.

BRIGHTON PINCH MENTHOL 100

Similar to previously introduced Brighton Convertible Menthol 100 and Tennyson Menthol 100.

11/68

Discontinued.

BULL DURHAM 85

Introduced - king size with larger circumference than normal cigarettes - 20 mm CA filter.

6/66

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CARLTON 70

70 mm cigarette with 25 mm CA filter - Tar (0.7 mg), nicotine (0.15 mg). Data noted on pack "Tar" = 3 mg - Nicotine = 0.3 mg.

5/69

Increased filter ventilation, a more porous cigarette paper and a smaller circumference lowered tar to 1 mg and nicotine to 0.1 mg deliveries.

1/76

Expanded tobacco introduced at 35% level; reconstituted tobacco level decreased (25 to 18%).

9/76

Discontinued.

CARLTON 85

Introduced - king size, dual filter with paper inner filter containing 3 mg of carbon - paper perforated immediately in front of tipping paper - TPM (8 mg), nicotine (0.5 mg) - Package label states: "Tar" = 2.8 mg, Nicotine = 0.4 mg.

1/66

TPM and nicotine reduced by changing to filter ventilation - Package label states: "Tar" = 2.7 mg, Nicotine = 0.3 mg.

5/66

TPM (3 mg) and nicotine (0.2 mg) increased - less efficient filters - Package label states: "Tar" = 3.9 mg and Nicotine = 0.4 mg.

10/66

TPM and nicotine deliveries increased by changing filter ventilation - "Tar" and nicotine data no longer stated on label.

1/65

TPM, nicotine and organic gas phase deliveries increased - Changes observed in total RTD, fiber denier and tobacco weight - Alkaloids increased slightly.

5/65

Total RTD decreased.

4/66

TPM and nicotine decreased - Filter efficiency increased as result of fiber denier changed.

5/66

"Tar" and nicotine data stated on package label. "Tar" = 9.5 mg and nicotine = 0.6 mg.

6/66

TPM and nicotine decreased, 3 mg and 0.1 mg by increasing ventilation. Data on pack changed - "Tar" = 9 mg and Nicotine = 0.6 mg.

10/66

Data on pack changed - "Tar" = 7 mg and Nicotine = 0.5 mg. Tar (2 mg) and nicotine (0.2 mg) decreased by increase in filter ventilation.

4/67

10/67

Tar (1 mg) and nicotine (0.1 mg) increased by changes in fiber shape and fiber denier.

12/67

A model of Carlton with 25 mm CA filter introduced with tar of 2.0 mg.

2/69

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CARLTON 85 (cont.)

Filter change from 20 mm dual filter to 25 mm CA filter. 7/69

Tar (4 to 1 mg) and nicotine (0.4 to 0.2 mg) reduced by increased filter ventilation and lowering tobacco weight - Expanded tobacco content increased from 0 to 42%. 3/76

CARLTON 85 (BOX)

Cigarettes packaged in a flip top box to replace the 70 mm Carlton cigarettes already on the market. Similar to Carlton 85 soft pack cigarettes. Tar (1 mg) and nicotine (0.1 mg) listed on pack. 1/77

Tar (<1.0 to <0.01 mg) and nicotine (0.1 to 0.002 mg) data listed on pack changed as indicated. 3/81

Ventilation was changed from four to six rows of laser perforation. Paper porosity changed from 14 to 7 sec. Both tar and nicotine deliveries of these cigarettes remains at 0.00 mg. 8/81

Name changed to Ultra Carlton. 7/88

CARLTON MENTHOL 85

Introduced - Mentholated version of Carlton 85 plain. 1/72

Tar (4 to 1 mg) and nicotine (0.4 to 0.1 mg) reduced by increased filter ventilation and lowering tobacco weight - Expanded tobacco content increased from 0 to 45%. 2/76

New package graphics. 7/88

CARLTON 100'S

National distribution - low tar (6 mg) and nicotine (0.5 mg) achieved by a 27 mm CA filter containing ventilation (52%). A low tobacco weight and rod density resulted from high ET content (33%). Tar (5 mg) and nicotine (0.5 mg) listed on pack. 4/77

Lower tar (5.9 to 4.4 mg) and nicotine (0.5 to 0.4 mg) deliveries resulted from a change to a more porous cigarette paper. 11/77

Lower tar (5 mg), nicotine (0.4 mg) and CO (9 mg) deliveries resulting from higher ventilation - lower total RTD. 1/86

New package graphics. 7/88

CARLTON 100 (BOX)

Introduced - Tar (0.8 mg) and nicotine (0.08 mg) - Ultra low delivery result of high filter ventilation (84%). 4/80

New package graphics. 7/88

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AMERICAN TOBACCO COMPANY

AS

CARLTON MENTHOL 100 (Box)

Introduced in Texas - Tar (1.0 mg) and nicotine (0.1 mg) - similar to Carlton 100 (Box). 1/82  
National distribution. 7/85  
New package graphics. 7/88

CARLTON MENTHOL 100

Introduced on test market - Low delivery (4 mg tar and 0.4 mg nicotine) mentholated cigarettes similar to Carlton 100 cigarettes previously introduced. Blend contains 33% ET. 11/77  
New package graphics. 7/88

CARLTON SLIMS DELUXE 100 (BOX)

National distribution-delivers 7 mg tar and 0.6 mg nicotine. 1/84

CARLTON SLIMS DELUXE MENTHOL 100 (BOX)

National distribution-delivers 7 mg tar and 0.6 mg nicotine. 1/84

CARLTON 120

Introduced - test market - Tar (7.2 mg) and nicotine (0.61 mg). The blend contains 34% expanded tobacco - ventilation system consists of two rows of laser perforation. 7/81  
New package graphics. 7/88

CARLTON MENTHOL 120

Introduced - test market - Tar (6.4 mg) and nicotine (0.59 mg). The ventilation system consists of two rows of laser perforation. 8/81  
Tar (5.9 to 7.4 mg), nicotine (0.57 to 0.77 mg), and CO (4.5 to 6.6 mg) increased - ventilation (37 to 28%) decreased. 11/82  
New package graphics. 7/88

COLD HARBOR 15

Introduced - king size in soft pack - similar to Waterford with menthol added to filler. 6/66  
Discontinued.

COLONY FILTER 15

Introduced - One of the first American Tobacco brands with coupons - 20 mm CA filter. 9/66  
Discontinued.

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## AMERICAN TOBACCO COMPANY

A6

COLONY MENTHOL 85

Introduced - One of the first American Tobacco brands with coupons - 20 mm CA filter.

9/66

Discontinued.

COLONY FILTER 100

Introduced - 100 mm cigarette with 20 mm CA filter.

5/67

Discontinued.

COLONY MENTHOL 100

Introduced - 100 mm cigarette with 20 mm CA filter.

5/67

Discontinued.

COMPASS 85

Test marketed - king size mentholated - 20 mm CA filter.

6/65

Discontinued.

DOUBLE EIGHT 88

Double Eight, 88 mm long, replaced Pall Mall 88 on the market - Packaged in a black and white striped pack.

7/68

Discontinued.

FIFTY-FIFTY 100

Introduced - 100 mm cigarette with 45 mm CA filter.

2/67

Tar (3 mg) and nicotine (0.2 mg) increased by changes in cigarette paper.

10/67

Discontinued.

FRESH CONVERTIBLES 100

Similar to Tennyson Convertible Menthol 100, plug-space-plug filter, with capsules containing menthol and carbon granules in space.

9/69

Discontinued.

H. TAREYTON 85 (NW)

Removed from C.I. tables. History of brand in C.I. 5/64.

11/63

Chloride type paper component used.

4/63

TPM and nicotine deliveries reduced.

6/63

TPM reduced by 4 mg as a result of changes in paper porosity, paper component and fiber denier.

3/64

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HALF & HALF 85

Introduced - king size in soft pack with "pipe tobacco blend".

5/64

ICEBERG 10 MENTHOL 85

Low delivery (10 mg tar and 0.8 mg nicotine) with new Filtrona filter - Mentholated cigarette. Blend contains expanded tobacco (4%) and expanded RKS (3%).

5/72

Discontinued.

ICEBERG MENTHOL 100

Test marketed - 100 mm mentholated cigarette with a 30 mm "Filtrona-type" filter similar to the one used on Lucky Ten 100. Blend contains expanded tobacco and stems.

2/74

Cigarette re-engineered - Tar (10 to 5 mg) and nicotine (0.7 to 0.3 mg) decreased. Filtrona-type filter replaced by standard CA filter with 47% ventilation.

7/76

LTC 85

LTC (low tar cigarette) - similar to Lucky Ten in all characteristics.

8/71

Discontinued.

LONG JOHN 120

Introduced 120 mm cigarette with brown paper colored with azo dyes. Circumference 22.5 mm. Tar (20 mg) and nicotine (1.7 mg) deliveries.

5/75

Discontinued.

LONG JOHN MENTHOL 120

Introduced 120 mm menthol cigarette with brown paper colored with azo dyes. Circumference 22.5 mm. Tar (17 mg) and nicotine (1.4 mg) deliveries.

5/75

Discontinued.

LUCKY 100'S

Introduced - Similar to previously marketed Lucky Ten 100 - 30 mm "Filtrona" filter.

6/74

Cigarette re-engineered - Tar (10 to 5 mg) and nicotine (0.8 to 0.4 mg) decreased. Filtrona-type filter replaced by standard CA filter with 47% ventilation.

7/76

Discontinued.

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LUCKY FILTERS 100

Introduced - 100 mm cigarette with a 20 mm dual filter, 10 mm crimped tobacco with carbon and 10 mm CA filter. 3/67

Filter length (20 to 25 mm) increased, tar lower by 1 mg. 7/68

Name changed - Lucky Strike 100 to Lucky Filters 100. 8/68

Coupon added to pack. 6/69

Filter change from 25 mm dual filter to 25 mm CA filter, cigarette paper porosity change (12 to 21 seconds), tar (1 mg) and nicotine (0.1 mg) increased. 9/69

Reconstituted tobacco decreased (20 to 15%). 10/69

Discontinued.

LUCKY FILTERS (POLYMER) - 85

85 mm version of Lucky Filters, with a new polymer filter, was introduced. The twenty-five (25) mm filter consists of a CA-space-CA (10-5-10) with the space containing approximately 100 mg of polyethylene and alumina. 9/68

Discontinued.

LUCKY FILTERS (POLYMER) - 100

100 mm version of Lucky Filters, with a new polymer filter, was introduced. The twenty-five (25) mm filter consists of a CA-space-CA (10-5-10) with the space containing approximately 100 mg of polyethylene and alumina. 9/68

Discontinued.

LUCKY STRIKE 70 (NE)

Paper porosity and paper component increased - TPM reduced by 5 mg. 1/62

TPM increased by 2 mg. 7/62

TPM increased by 1 mg. 12/62

TPM decreased by 1.5 mg. 6/63

TPM decreased by 2 mg by changing paper component and porosity. 5/64

Reconstituted tobacco content increased (7 to 11%). 4/66

Circumference and tobacco weight decreased. 9/66

TPM and nicotine increased, 6 mg and 0.2 mg respectively, by changing paper component, citrate to phosphate, and decreasing paper porosity. 10/66

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LUCKY STRIKE 70 (MF) (cont.)

Reconstituted material increased 9 to 12%.	9/68
Reconstituted material increased 12 to 17%.	10/70
Expanded tobacco added to blend (4%).	1/72
Expanded tobacco increased 4 to 6%.	1/74
Lower tar (1 mg) and nicotine (0.1 mg) correlating with a lower filler rod TPM.	11/75
Tar delivery (27 to 25 mg) decreased by increase in paper porosity.	2/76

LUCKY STRIKE FILTER 10

Plain - Test marketed in a soft pack - First 80 mm cigarette in a soft pack in the U.S. - High tar (26 mg) and nicotine (1.6 mg) correlating with a low filtration efficiency.	12/75
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Discontinued.

LUCKY STRIKE FILTER 15

Test marketed - king size triple filter (CA; carbon on CA; CA) - filter has gas phase activity.	8/64
Test marketed with 20 mm CA filter - high TPM.	11/64
TPM (2 mg) and nicotine (0.1 mg) decreased by increase in filter efficiency.	11/66
TPM (2 mg) and nicotine (0.1 mg) decreased by increase in paper porosity.	12/66
TPM reduced by a filter change from single CA to dual filter - Dual filter consisted of inner filter made from crimped tobacco sheet with embedded carbon and an outer CA filter.	9/67
Change from 20 mm dual filter to 20 mm CA filter.	8/69
Reconstituted tobacco increase (14 to 18%).	4/70
Tar (3 mg) and nicotine (0.3 mg) increased as result of blend change.	5/70
Discontinued.	12/71

LUCKY STRIKE 85

Introduced - test market - delivers 11.6 mg tar and 0.94 mg nicotine. The cigarette length is 83 mm. American Brands has no other 85 mm cigarette in the 10-12 mg tar category.	11/81
Expanded stems removed and reconstituted tobacco increased (20%) in blend - no changes in smoke deliveries.	5/86

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LUCKY STRIKE 85 (BOX)

Introduced - test market - delivers 11.2 mg tar and 0.88 mg nicotine. The ventilation consists of one row of laser perforation. The cigarette length is 83 mm. American Brands has no other 85 mm cigarette in the 10-12 mg tar category.

11/81

Tar (12 to 13 mg), nicotine (0.9 to 1.0 mg) and CO (12 to 14 mg) deliveries increased as a result of lower ventilation (19 to 14%).

9/89

LUCKY STRIKE MENTHOL 85

Introduced - 85 mm mentholated cigarette with 20 mm CA filter.

6/66

Discontinued.

12/68

Re-introduced nationally - delivers 11 mg tar, 0.8 mg nicotine and 0.6 mg smoke menthol.

5/86

LUCKY STRIKE 100

Introduced in February 1984 delivers 11 mg tar and 1 mg nicotine.

3/84

LUCKY STRIKE MENTHOL 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter.

4/67

TPM (2 mg) and nicotine (0.2 mg) decreased by changing to a more porous paper.

5/67

Filter length (20 to 25 mm) increased, tar lower (1 mg).

7/68

Discontinued.

12/68

Reintroduced-delivers 10 mg tar, 0.8 mg nicotine and 0.8 mg smoke menthol-24 mm circumference.

11/85

National

3/86

LUCKY STRIKE LIGHTS 85

Introduced - deliveries 7 mg tar - has the shortest cigarette length of any king size cigarette in a soft pack.

11/83

LUCKY STRIKE LIGHTS 100

Introduced - delivers 9 mg tar.

11/83

LUCKY TEN 85

Low delivery (10 mg tar and 0.8 mg nicotine) with new Filtrona filter - Blend contains expanded tobacco (5%).

8/71

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LUCKY STR 85 (cont.)

A decrease in tar (9 to 8 mg) resulting from a change in filters from a 25 mm Filtrona-type filter to a 25 mm standard CA filter containing ventilation (35%). Lower total RTD noted.

4/77

Discontinued.

12/77

LUCKY STR 100

Test marketed - 30 mm Filtrona filter with triangular openings at each end and constricted in the middle. 54 expanded tobacco. Tar (9 mg) and nicotine (0.9 mg) listed on pack.

4/73

Discontinued.

12/77

MALIBU 85

National distribution - delivers 17 mg tar and 1.2 mg nicotine.

9/88

MALIBU MENTHOL 85

National distribution - delivers 16 mg tar, 1.2 mg nicotine, and 0.7 mg smoke menthol.

9/88

MALIBU LIGHTS 85

National distribution - delivers 9 mg tar and 0.7 mg nicotine.

9/88

MALIBU 100

Test marketed in New Hampshire, Peoria and Spokane - first value entry - delivers 11 mg tar and 1 mg nicotine.

3/87

MALIBU MENTHOL 100

Test marketed in New Hampshire, Peoria and Spokane - first value entry - delivers 11 mg tar, 1 mg nicotine and 0.6 mg smoke menthol.

3/87

MALIBU LIGHTS 100

Test marketed in New Hampshire, Peoria and Spokane - first value entry - delivers 9 mg tar and 0.8 mg nicotine.

3/87

MALIBU ULTRA LIGHTS 100

Distributed nationally as a branded generic - delivers 6 mg tar and 0.5 mg nicotine - packaged in a yellow pack.

9/89

MARYLAND 100

100 mm cigarette with 100% air-cured tobacco - No RKS or reconstituted material.

3/70

Discontinued.

12/71

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MARYLAND MENTHOL 100

100 mm mentholated cigarette with 100% air-cured tobacco -  
Contains no reconstituted material or RKS.

10/70

Discontinued.

12/71

MERMAID MENTHOL 100

Test marketed - 25 mm CA filter - Blend contains RKS which  
has been processed to give an expanded appearance.

11/71

Discontinued.

MISTY LIGHTS 100 (BOX)

Test marketed in California and Louisiana - delivers 8 mg  
tar and 0.7 mg nicotine - will sell for the full price  
in California and will sell for the generic price in  
Louisiana.

9/69

MISTY LIGHTS 100 MENTHOL (BOX)

Test marketed in California and Louisiana - delivers 8 mg  
tar, 0.7 mg nicotine and 0.5 mg smoke menthol - will sell  
for the full price in California and for the generic  
price in Louisiana.

9/69

MONTCLAIR 82

Introduced - mentholated! dual filter, carbon section -  
released menthol, which is concentrated there, as TPM is  
picked up - has no gas phase activity.

3/62

TPM, nicotine, and menthol deliveries increased.

8/62

Paper component identified as chloride type.

4/63

TPM and nicotine', deliveries increased by changing filter  
ventilation - "Tar" and nicotine data no longer stated on  
label.

1/64

TPM reduced 7 mg as result of a new filter and filter  
ventilation - Package label states: "Tar" = 5.2 mg,  
Nicotine = 0.5 mg.

5/64

TPM reduced 5 mg. Nicotine delivery also decreased, RTD  
increased. TPM reduced 4 mg by changing paper component  
and porosity.

6/64

Carbon type changed, coconut to coal.

10/64

TPM (4 mg) and nicotine (0.2 mg) increased, less efficient  
filter - Package label states: "Tar" = 6.9 mg, Nicotine =  
0.7 mg.

11/64

Menthol content and delivery increased.

8/65

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MONTCLAIR 85 (cont.)

Menthol content and delivery increased.	7/66
TPM (2 mg) decreased by increasing filter ventilation.	5/67
TPM (4 mg) and nicotine (0.2 mg) decreased by changes in filter ventilation, filter efficiency, and paper porosity.	6/67
Coupon added to pack.	9/67
Circumference decreased (23.2 to 24.9 mm); lower tobacco weight noted.	12/68
Reconstituted tobacco content increased (20 to 36%).	4/69
Change from 20 mm dual filter to 20 mm CA filter.	8/69
Reconstituted tobacco decreased (36 to 28%).	10/69
Tar (6 mg) and nicotine (0.5 mg) increased by elimination of filter ventilation, change to less porous paper. Reconstituted tobacco decreased (28 to 19%).	4/70
Reconstituted tobacco increased (19 to 23%).	9/71
Expanded tobacco added to blend (3%) - Higher filler menthol and menthol delivery noted.	2/73
Expanded stems added to blend (12%) and reconstituted material decreased from 17 to 8% - No change in smoke deliveries.	3/73
Expanded tobacco removed from blend. Tar (1 mg) and nicotine (0.1 mg) decreased - Alkaloids and sugars lower.	2/75
Discontinued.	12/75

PALL MALL 85 (NP)

Paper porosity and RTD increased; TPM and nicotine deliveries reduced (3 mg and 0.1 mg).	4/63
Nicotine delivery reduced slightly.	6/63
TPM and nicotine reduction, 6 mg and 0.2 mg respectively, by changing paper component, phosphate to citrate, and increasing paper porosity.	1/64
TPM and nicotine increased, 7 mg and 0.3 mg respectively, by changing paper component, citrate to phosphate, and decreasing paper porosity.	10/66
Reconstituted material increased, 9 to 12%.	4/67
TPM (6 mg) and nicotine (0.2 mg) decreased by changing paper additive and increasing paper porosity.	5/67
Expanded tobacco added to blend (2%).	1/73

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PALL MALL 85 (NP) (25's)

Expanded tobacco increased from 2 to 6.	1/74
Expanded stems added to blend (3%).	9/75
Lower tar (1 mg) and nicotine (0.1 mg) correlating with a lower filler rod TPM.	11/75
Lower tar (25 to 23 mg) and nicotine (1.5 to 1.4 mg) deliveries resulting from a change to a more porous cigarette paper.	6/79
Cigarette length (84.8 to 83.7 mm) decreased.	8/82
Test marketed in Rhode Island - contains 25 cigarettes per pack - similar to Pall Mall 85 (NP) - 200 cigarettes per carton - cigarettes packed in an 8-9-8 configuration in the pack.	5/83
National Distribution.	5/86

PALL MALL "UNFILTERED" LIGHTS 85 (SP)

Test market - Rhode Island - delivers 14 mg tar, 1 mg nicotine and has a tobacco filter with porous plugwrap and two rows of laser perforation. The tobacco filter blend (24% reconstituted tobacco, 11% expanded stems and 39% expanded tobacco) is different from the blend of the tobacco column.	9/86
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PALL MALL 88

Pall Mall cigarettes, 88 mm long, introduced in white pack with gold lettering.	5/68
Discontinued.	

PALL MALL 100

Plain - Test marketed in new air tight hermetically sealed "polyfoil pak."	10/74
Preon expanded tobacco has been added at the 9% level resulting in a lower tobacco weight (0.905 to 0.863 g).	7/81
Ventilation was incorporated (11%) resulting in lower tar (16 to 15 mg), nicotine (1.2 to 1.1 mg) and CO (16 to 15 mg) deliveries.	7/89
Ventilation removed resulting in higher tar (15 to 17 mg), nicotine (1.1 to 1.2 mg) and CO (14 to 15 mg) deliveries.	11/89

PALL MALL MENTHOL 100

Menthol - Test marketed in new air tight hermetically sealed "polyfoil pak."	10/74
Discontinued.	

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A15

PALL MALL EXTRA MILD 80

Low delivery (9 mg tar and 0.7 mg nicotine) with new  
Filtrona molded filter - Blend contains expanded tobacco  
(49) - Similar to Lucky Ten 85 in most characteristics.

7/72

Discontinued.

12/77

PALL MALL EXTRA LIGHT 85

85 mm cigarette similar to 80 mm version previously  
introduced in 7/72.

8/72

Tar (6 mg) and nicotine (0.7 mg) decreased - Filtrona filter  
with no ventilation was replaced by a standard CA filter with  
45% ventilation. Tobacco weight and rod density were higher  
as result of elimination of ET from blend.

6/76

PALL MALL EXTRA LIGHT 85

Brand name changed from Pall Mall Extra Mild 85 to Pall Mall  
Extra Light 85. No changes in smoking or physical  
characteristics. Tar delivery listed on pack as  
"7 mg or Less".

4/78

PALL MALL FILTER 80 (BOX)

Test marketed in hard box (80 mm) - Tar (19 mg) and nicotine  
(1.2 mg) deliveries.

9/71

Reintroduced - plain - test marketed in a red flip top box  
similar in color and design to the soft pack used for Pall  
Mall 85 Nonfilter cigarettes - High tar (24 mg) and nicotine  
(1.3 mg) deliveries correlating with a low filtration  
efficiency.

12/75

Discontinued.

PALL MALL FILTER 85

Test marketed in soft pack (85 mm) - Tar (20 mg) and  
nicotine (1.3 mg) deliveries.

5/71

Reintroduced - plain - test marketed in a red soft pack  
similar to that used for Pall Mall 85 Nonfilter cigarettes -  
Filter RTD extremely low resulting in a low filtration  
efficiency - Tar (25 mg) and nicotine (1.6 mg) deliveries.

10/75

Tar (25 to 18 mg) and nicotine (1.6 to 1.2 mg) decreased  
as result of a longer (17 to 20 mm), more efficient filter.

12/76

PALL MALL FILTER LIGHTS 85

The incorporation of ventilation (14%) and a change to a  
more porous cigarette paper resulted in lower tar (16 to  
13 mg), nicotine (1.2 to 1.0 mg) and CO (16 to 12 mg)  
deliveries. The pack has been modified by adding a blue  
banner to the design.

11/86

2031438424

PALL MALL FILTER 95

Introduced - 95 mm long cigarette in gold crush-proof box with hinge top - 15 mm CA filter. 3/66

Tar (6 mg) and nicotine (0.3 mg) reduced by increasing filter length (15 to 25 mm) and tipping paper (21 to 30 mm). 2/68

Brand discontinued - Replaced with 100 mm size in crush-proof box. 3/71

Discontinued.

PALL MALL FILTER MENTHOL 95

Introduced - 95 mm long in new type package - mentholated - 15 mm CA filter. 11/65

Tipping paper increased (19 to 21 mm). 7/67

Tar (6 mg) and nicotine (0.2 mg) reduced - single package comprised of twin crush-proof boxes - one box contains ten mentholated and the other ten non-mentholated cigarettes. 2/68

Discontinued.

PALL MALL FILTER 100

Test marketed - 100 mm long - Same as Pall Mall nonfilter with 15 mm CA filter. 10/64

TPM (3 mg) and nicotine (0.2 mg) decreased by an increase in filter efficiency. 11/66

Tipping paper increased 19 to 21 mm. 2/67

Reconstituted material increased 9 to 12%. 4/67

TPM (3 mg) decreased by increasing filter length (17 to 20 mm) and by increasing paper porosity. 5/67

Tar (2 mg) and nicotine (0.3 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 10/67

Circumference decreased (24.7 to 24.4 mm) and tobacco weight decreased, no change in tar or nicotine. 11/68

Tar (1 mg) and nicotine (0.1 mg) reduced by an increase in filter efficiency - High total and filter RTD noted. 10/70

Filter length (25 to 27 mm) and tipping paper (30 to 32 mm) increased - No change in smoke deliveries. 3/74

Addition of 3% ES to blend. 4/75

Discontinued.

Introduced in Atlanta, Georgia - delivers 14 mg tar and 1 mg nicotine - packaged in a red pack with a blue banner. 5/87

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PALL MALL FILTER MENTHOL 100

Introduced - 100 mm mentholated cigarette with 15 mm CA filter. 10/66

Tipping paper increased (19 to 21 mm). 2/67

TPM (2 mg) decreased by increasing filter length (17 to 20 mm) and by increasing paper porosity. 5/67

Tar (2 mg) and nicotine (0.3 mg) reduced by increases in filter length (20 to 23 mm) and tipping paper (24 to 30 mm). 10/67

Tar (1 mg) and nicotine (0.1 mg) reduced by a blend change. 3/68

Circumference decreased (24.9 to 24.6 mm) and tobacco weight decreased, no change in tar and nicotine. 11/68

Tar (1 mg) and nicotine (0.1 mg) increased by changes in blend and heavier tobacco weight; smoke and filler menthol decreased. 10/69

Reconstituted tobacco decreased (22 to 17%). 10/69

Reconstituted tobacco increased (16 to 21%). 10/70

Addition of expanded RKB (11%) and expanded tobacco (3%).  
to blend - Reconstituted tobacco content reduced (21 to 7%).  
Alkaloids increased and fiber shape changed from X to Y -  
shape. Total and filter RTD increased. 5/72

Expanded tobacco removed from blend. Tar (1 mg) and  
nicotine (0.1 mg) decreased. Alkaloids and sugars lower. 2/75

Discontinued.

PALL MALL FILTER 100 (BOX)

Plain - This new 100 mm cigarette in a crush-proof box  
replaces the previously marketed Pall Mall 95 cigarettes  
in a flat twin pack. 4/71

Discontinued.

PALL MALL FILTER MENTHOL 100 (BOX)

Menthol - This new 100 mm cigarette in a crush-proof box  
replaces the previously marketed Pall Mall 95 cigarettes  
in a flat twin pack. 4/71

Discontinued.

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PALL MALL LIGHTS 100's

Introduced - 100 mm low tar (12 mg) and nicotine (1.0 mg) brand characterized by 27 mm filter with 24% ventilation. Blend contains 8% expanded tobacco and 2% expanded stems.

7/78

Tar (10.6 to 8.1 mg), nicotine (0.94 to 0.74 mg) and CO (10.3 to 7.6 mg) reduced - increase in filter ventilation (28 to 47%) decrease in filter RTD (4.6 to 3.6).

2/81

Tar (8.4 to 10.9 mg), nicotine (0.8 to 1.0 mg) and CO (8 to 10 mg) increased due to reduced ventilation (53 to 36%) - total RTD increased (3.2 to 4.2). 7/83

CO (10 to 12 mg) delivery increased due to decreased filter ventilation (37 to 23%) - higher filter RTD (3.0 to 4.2 in. M20) correlated with higher efficiency (48 to 54%).

1/84

Tar (10.9 to 9.3 mg) and CO (12.1 to 10.4 mg) decreased - ventilation increased (22 to 28%).

9/84

PALL MALL LIGHT MENTHOL 100's

Introduced - 13 mg tar and 1.1 mg nicotine - Blend contains 12% expanded tobacco and 12% expanded stems. Cigarette has mechanically perforated cigarette paper and no ventilation.

4/79

PINNACLE 85

New 85 mm cigarette with 25 mm geometrically shaped filter similar to that on Vantage (RJR); however, filter is reversed.

9/70

Discontinued.

PINNACLE MENTHOL 85

Test marketed - king size - dual filtered mentholated - tobacco blend markedly different.

4/65

Discontinued.

SAFARI 100

Test marketed - 100 mm cigarette with 25 mm CA filter. New type package - pouch pack with fin seals.

1/73

Discontinued.

SILVA THINS 100

100 mm cigarette with 20 mm CA filter; small circumference (22 mm) and 26% reconstituted material.

9/67

Reconstituted tobacco decreased (26 to 13%) and paper porosity increased - No change in smoke deliveries.

5/68

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SILVA THINS 100 (cont.)

Blend changed as indicated by higher alkaloids and a markedly lower reducing sugar - The nicotine delivery (0.1 mg) was increased by this change. 7/70

Expanded stem added to blend at 10% level and reconstituted tobacco content reduced 18 to 11% - Filter changed from 20 mm paper to 25 mm CA. Lower tobacco weight and rod density noted. Tar decreased (2 mg). 2/72

Expanded stem content increased (10 to 16%). 3/73

Lower tar (16 to 12 mg) and nicotine (1.2 to 1.1 mg) deliveries resulting from introduction of filter ventilation (30%). Increases in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) were also noted. 8/77

The addition of 4% ET - ES increased from 8 to 16% resulting in a lower tobacco weight. 5/82

Tar (11 to 12 mg) and CO (10 to 11 mg) increased as a result of lower ventilation (30 to 20%). 11/85

SILVA THINS 100 (BOX)

Test marketed - delivers 10 mg tar, 0.8 mg nicotine and has longer filter, longer tipping paper length, larger circumference and less porous cigarette paper than the Soft Pack. 3/86

SILVA THINS MENTHOL 100

100 mm cigarette with small circumference - Similar to Silva Thins Plain in all characteristics except for menthol. 8/68

Blend changed as indicated by higher alkaloids and lower reducing sugars. Filler rod TPM increased (2 mg) and tar delivery increased (1 mg). 9/71

Filter length increased 20 to 25 mm - No change in smoke deliveries. 5/74

Lower tar (15 to 12 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from introduction of filter ventilation (30%). Increases in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) were also noted. Introduced expanded stem at 3% level. 8/77

Lower tar (12 to 7 mg) and nicotine (1.0 to 0.8 mg) deliveries correlating with a more efficient filter and a lower filler rod TPM. 5/79

Tar (7 to 11 mg) and nicotine (0.8 to 1.0 mg) increased by a decrease in filter ventilation. 8/79

Changed the filter from 27 mm paper to 27 mm CA - Tar (11 to 12 mg) and nicotine (0.9 to 1.1 mg) increased as result of less efficient filter. 9/80

2031438428

SILVA THINS MENTHOL 100 (cont.)

The addition of 4% ET - ES increased from 8 to 16% resulting in a lower tobacco weight.

5/82

Tar (11 to 12 mg) and CO (10 to 11 mg) increased as a result of lower ventilation (30 to 20%) - higher smoke menthol delivery (0.4 to 0.5 mg).

11/85

SILVA THINS MENTHOL 100 (BOX)

Test marketed - delivers 10 mg tar, 0.8 mg nicotine and 0.4 mg smoke menthol and has a longer filter, longer tipping paper length, larger circumference and less porous cigarette paper than the Soft Pack.

3/86

SUPER M MENTHOL 100

Test marketed - 100 mm mentholated cigarette in new air tight hermetically sealed "polyfoil pak" - Same pack as used on Safari 100.

5/74

Discontinued.

SWEET CAPORAL 85

Introduced - king size with 20 mm CA filter.

10/65

Discontinued.

TALL 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter - white striped cigarette paper - Tar (19 mg) and nicotine (1.4 mg) deliveries.

8/75

Tar (18 to 21 mg), nicotine (1.6 to 1.7 mg), and CO (20 to 21 mg) increased - ventilation reduced (36 to 30%).

9/83

Lower tar (18 to 17 mg), nicotine (1.6 to 1.5 mg) and CO (19 to 17 mg) deliveries resulted from an increased filter ventilation (36 to 45%). A lower puff count (15 to 14) and a lower total RTD (133 to 108 mm) were also observed.

9/89

TALL MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter - white striped cigarette paper - Tar (19 mg) and nicotine (1.4 mg) deliveries.

8/75

Tar (18 to 20 mg), nicotine (1.6 to 1.7 mg), and CO (17 to 21 mg) increased - ventilation decreased (36 to 31%).

9/83

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A21

TAREXTON 15

Paper component now being used, identified as chloride type.	4/63
TPM reduced by 3 mg - Nicotine delivery decreased by 0.1 mg. Total and filter RTD increased.	6/63
TPM and nicotine reduced (4 mg and 0.1 mg) - Change in paper component and porosity.	2/64
Fiber shape changed, I to cloverleaf.	8/64
Fiber denier changed, 5.0 to 4.0.	11/64
Fiber shape changed, cloverleaf to I.	5/65
Reconstituted tobacco content increased (10 to 14%). Tipping paper increased 19 to 24 mm, paper porosity increased - TPM unchanged.	10/65 2/67
TPM (1 mg) decreased as result of change in filter length - Paper porosity decreased 14 to 20 seconds.	4/67
Reconstituted tobacco decreased 20 to 15%.	10/69
Addition of 3% ES to blend.	4/75
Tar decreased (19 to 17 mg) resulting from a change to a more porous cigarette paper.	7/76

TAREXTON 15

Fresh expanded tobacco introduced to the blend at the 9% level resulting in a lower tobacco weight. Change resulted in lower tar (16 to 14 mg) and nicotine (1.2 to 1.0 mg) deliveries.	8/78
Lower tar (15 to 13 mg) correlating with a higher RTD for the inner paper filter.	5/79

TAREXTON LIGHTS 15

Test marketed - an 85 mm low tar (8 mg) and nicotine (0.6 mg) cigarette. 27 mm dual filter with filter ventilation (44%) consisting of 17 mm CA outer filter and 10 mm paper inner filter. Inner filter contains carbon granules. Longest filter of any 85 mm cigarette on the market.	1/77
Tar (7 to 4 mg) and nicotine (0.7 to 0.3 mg) decreased resulting from an increase in filter ventilation and lower tobacco weight. Lower tobacco weight result of the addition of expanded tobacco (32%).	2/80
Tar (9 to 6 mg), nicotine (0.4 to 0.3 mg) and CO (5 to 6 mg) increased as a result of decreased ventilation (53 to 41%).	11/86

2031438430

TAREYTON MENTHOL 85

Introduced on test market - Low delivery (7 mg tar and 0.6 mg nicotine), mentholated brand similar in most characteristics to Tareyton Lights 85 previously introduced. Contains no charcoal in filter.

9/77

Discontinued.

TAREYTON 100

Introduced - 100 mm 20 mm dual filter.

4/67

TPM (2 mg) decreased as result of changing paper porosity.

5/67

Tar (2 mg) and nicotine (0.2 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). Filter length (20 to 25 mm) increased, no changes in smoke deliveries.

9/68

Tar (2 mg) and nicotine (0.1 mg) increased correlating with a reduction in filter efficiency.

11/70

Tar (2 mg) increased - Higher filler rod TPM and puff count.

12/71

Filter length (25 to 27 mm) and tipping paper (30 to 32 mm) increased. Lower tar (1 mg) noted.

10/73

Addition of 3% ES to blend.

4/75

Tar (19 to 17 mg) and nicotine (1.4 to 1.3 mg) decreased resulting from a change to a more porous cigarette paper.

7/76

Lower tar (17 to 15 mg) and nicotine (1.3 to 1.2 mg) deliveries resulting from decrease in filler rod TPM delivery.

5/78

Free expanded tobacco introduced to the blend at the 9% level resulting in a lower tobacco weight. Change resulted in lower tar (15 to 13 mg) and nicotine (1.2 to 1.0 mg) deliveries.

8/78

TAREYTON LONG LIGHTS 100

Introduced - 100 mm low tar (8 mg) and nicotine (0.7 mg) cigarette. 27 mm dual filter with filter ventilation (37%) consisting of 17 mm CA outer filter and 10 mm paper inner filter. Inner filter contains carbon granules. Blend contains 7% expanded tobacco.

1/78

Tar (9 to 7 mg) and nicotine (0.8 to 0.7 mg) decreased resulting from an increase in filter ventilation (30 to 47%).

8/79

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A23

TAREXTON ULTRA LOW TAR MENTHOL 85

Test marketed - These new cigarettes deliver 2 mg tar and  
0.1 mg nicotine - 25 mm CA filter with 75% ventilation and  
blend containing 34% expanded tobacco.

3/79

Discontinued.

TENNYSON MENTHOL 85

Introduced - king size mentholated - carbon portion of  
dual filter has no gas phase activity.

10/65

Discontinued.

TENNYSON MENTHOL 100

100 mm mentholated cigarette - menthol contained in  
gelatin capsules which release menthol when filter is  
pinched - similar filter to that in Waterford.

10/67

Discontinued.

TWIST 100

Test marketed - 100 mm cigarette with lemon and menthol  
flavoring. Blend contains 10% expanded stems.

6/73

Discontinued.

12/75

ULTRA CARLTON

Name changed from Carlton 85 (Box) - new package graphics.

7/88

WATERFORD 85

Introduced - long size in crush proof box - novel filter  
containing two types of capsules in addition to charcoal -  
One of the capsule types contains water.

9/65

Discontinued.

12/66

WATERFORD 100

Introduced - king size in soft pack - novel filter contains  
only one type capsule containing water - Charcoal also  
present.

2/66

Discontinued.

WHITE LEAF 85

Test marketed - 85 mm filter cigarette with bleached all  
tobacco wrapper instead of cigarette paper.

6/67

Discontinued.

2031438432

B. BROWN AND WILLIAMSON TOBACCO COMPANYARCTIC LIGHTS 85

Test marketed - 85 mm cigarette delivering 9 mg tar and 0.7 mg nicotine. High alkaloid blend containing 14% expanded stems - 25 mm CA filter with 33% ventilation.

9/78

Discontinued.

ARCTIC LIGHTS 100

Test marketed - 100 mm cigarette delivering 10 mg tar and 0.8 mg nicotine. High alkaloid blend containing 14% expanded stems - 27 mm CA filter with 39% ventilation.

9/78

Discontinued.

AVALON 85

Introduced - test market - king size, triple filter, in soft pack.

7/63

Discontinued.

12/64

BARCLAY 80 (BOX)

Test marketed - ultra low tar (3.2 mg) - 27 mm CA filter containing 64% ventilation-blend contains 11% reconstituted tobacco, 18% expanded tobacco and 11% expanded stems.

10/80

Tar (3.0 to 1.3 mg), nicotine (0.17 to 0.08 mg) and CO (3.0 to 1.2 mg) reduced as result of increase in filter ventilation (66 to 84%) - rows of (16) holes increased (2 to 3) - elimination of reconstituted tobacco, expanded stems - increase in expanded tobacco (17 to 36%) - lower tobacco weight (0.582 to 0.520 g) - increase in total alkaloids (1.71 to 2.67%).

2/81

Reconstituted tobacco (19%) and expanded stems (5%) added to blend - expanded tobacco decreased (32 to 10%) - tobacco weight (0.533 to 0.628 g) and rod density (10.203 to 0.240 g/cc) increased.

1/85

BARCLAY ULTRA LIGHTS 80 (BOX)

Introduced in Wichita, Kansas - delivers 1 mg tar and 0.1 mg nicotine - utilizes the same filter as the Barclay 80 - similar to Barclay 80 in most characteristics.

11/84

Discontinued.

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BARCLAY 85

Test marketed - ultra low tar (2.5 mg) - 27 mm CA filter with 77% filter ventilation-blend contains 32% expanded tobacco and no reconstituted tobacco or expanded stems. 9/80

Reconstituted tobacco (19%) and expanded stems (3%) added to blend - expanded tobacco decreased (32 to 10%) - tobacco weight (0.550 to 0.678 g) and rod density (0.194 to 0.240 g/cc) increased. 1/85

Test marketed version of Barclay 85 with three rows of micro-mechanical perforation and one row of Mauni laser perforation and an Actron filter (manufactured by American Filtrona) that uses cellulose acetate as the plugwrap. 1/86

National distribution with filter design introduced in January, 1986. 5/86

BARCLAY MENTHOL 85

Introduced - nationally - 85 mm mentholated cigarette. Tar (1.4 mg) and nicotine (0.11 mg) - filter ventilation is achieved by a system of mechanical perforation and four longitudinal grooves along the filter. These cigarettes are similar in most characteristics to Barclay 85. 7/81

Uses cellulose acetate film as the plugwrap - filter manufactured by American Filtrona 9/85

Discontinued. 7/87

BARCLAY ULTRA LIGHTS 85

Introduced in Wichita, Kansas - delivers 1 mg tar and 0.1 mg nicotine - utilizes the same filter as the Barclay 85 - similar to Barclay 85 in most characteristics. 11/84

Discontinued.

BARCLAY 100

Test marketed - ultra low tar (3.5 mg) - 27 mm CA filter with 69% filter ventilation - blend contains 26% expanded tobacco, 6% reconstituted tobacco and 12% expanded stems. 9/80

Introduced nationally. 7/81

Decreased the amount of expanded tobacco (25 to 12%) and increased the amount of reconstituted material (7 to 17%) - increased tobacco weight and rod density. 7/85

Tar (3 to 5 mg) nicotine (0.3 to 0.4 mg) and CO (2 to 3 mg) increased - lower ventilation (76 to 69%). 11/85

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BARCLAY 100 (continued)

Test marketed version of Barclay 100 with two rows of micro-mechanical perforation and one row of Nauni laser perforation and an Actron filter (manufactured by American Filtrona) that uses cellulose acetate as the plugwrap.

1/86

National distribution with filter design introduced in January, 1986.

5/86

BARCLAY MENTHOL 100

Introduced - nationally - 100 mm mentholated cigarette. Tar (3.4 mg) and nicotine (0.28 mg) - filter ventilation is achieved by a system of mechanical perforation and four longitudinal grooves along the filter. These cigarettes are similar in most characteristics to Barclay 100.

7/81

Uses cellulose acetate film as the plugwrap - filter manufactured by American Filtrona.

9/85

Discontinued.

7/87

BARCLAY LIGHTS ULTRA THINS 100 (BOX)

Test market - Atlanta, Georgia - delivers 9 mg tar, 0.7 mg nicotine - 17 mm circumference.

11/87

BARCLAY LIGHTS ULTRA THINS MENTHOL 100 (BOX)

Test market - Atlanta Georgia - delivers 9 mg tar, 0.7 mg nicotine, and 0.7 mg smoke menthol - 17 mm circumference.

11/87

BARCLAY ULTRA LIGHTS 100

Introduced in Wichita, Kansas - delivers 4 mg tar and 0.4 mg nicotine - utilizes the same filter as the Barclay 100 - similar to Barclay 100 in most characteristics.

11/84

Discontinued.

RELAX 15

Introduced - king size recessed filter, mentholated.

6/60

Lighter filter.

6/62

Flush-type filter.

6/62

TPM reduced, and paper porosity increased - Carbowax (5%) observed in the filter.

12/63

Filler alkaloids increased resulting in higher nicotine delivery.

1/64

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RELATE 15 (continued)

Change in paper component, phosphate to citrate. 3/64

TPM reduced (2 mg). 8/64

Filler change reduced nicotine delivery by reducing total alkaloids. 9/64

Fiber shape changed from cloverleaf to X-shape. 3/66

TPM (1 mg) increased. 5/66

TPM (4 mg), nicotine (0.2 mg), and menthol in smoke (0.1 mg) decreased as result of change in paper porosity. 1/67

TPM (2 mg) decreased as result of blend change. 8/67

Tar (2 mg) reduced by increase in filter efficiency; fiber shape changed X to Y-shape. 3/68

Tar (1 mg), nicotine (0.2 mg), and menthol (0.5 mg) deliveries were reduced by changes in filter length (20 to 21 mm) and tipping paper (24 to 25 mm). 7/68

Reconstituted tobacco (7 to 11) and RRS (12 to 16) increased. 4/70

Addition of expanded RRS to blend replacing portion of regular RRS. 2/72

Lower total alkaloids (0.2%) and nicotine delivery (0.2 mg). 5/73

Tipping paper length increased 25 to 26 mm - No other changes. 7/73

Menthol in smoke content increased by increasing filler menthol. 3/76

Filler alkaloids and total reducing sugars were lower. Nicotine delivery reduced by 0.1 mg. 5/76

Lower tar delivery (15 to 13 mg) resulting from a change to a more porous, mechanically perforated cigarette paper. 8/77

Lower tar (13 to 12 mg) due to decrease in filler rod TPM delivery. 5/78

The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD. 10/78

Lower tar (12 to 8 mg) and nicotine (0.9 to 0.8 mg) deliveries resulting from the introduction of filter ventilation (26%) and an increase in tipping paper length. 1/79

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RELAXR 81 (cont.)

Tar (9 to 10 mg), nicotine (0.76 to 0.82 mg) and filler rod TPM (26.3 to 29.8 mg) increased resulting from less porous paper (7 to 13 sec.) with lower level of paper component (0.6 to 0.2%). - decreased total and filter RTD. 1/84

Increased filter and tipping lengths - lower tobacco weight resulted - no changes in smoke deliveries. 9/87

Test marketed in Illinois as a branded generic. This cigarette is packaged in a green and white pack and delivers 15 mg tar, 1.2 mg nicotine and 0.6 mg smoke menthol. 3/89

RELAXR 100

100 mm cigarette with 25 mm CA filter - Similar to Kool 100. 9/68

Coupon added to pack. 9/69

RKS decreased (17 to 13%). 10/69

Filter fiber shape changed - X-shape to Y-shape. 8/71

Addition of expanded RKS to blend replacing portion of regular RKS. 2/72

Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (2 mg) and nicotine (0.1 mg) decreased. 12/72

Lower total alkaloids (0.1%) and nicotine delivery (0.1 mg). 5/73

Menthol in smoke content increased by increasing filler men. 3/76

Lower tar delivery (16 to 14 mg) resulting from a change to a more porous, mechanically perforated cigarette paper. 8/77

Lower tar (14 to 13 mg) due to decrease in filler rod TPM delivery. Lower tobacco weight and rod density were also noted. 5/78

The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD. 10/78

Lower tar (13 to 8 mg) and nicotine (1.0 to 0.7 mg) deliveries resulting from the introduction of filter ventilation (33%) and an increase in tipping paper length (32 to 36 mm). A change to a less porous paper (7 to 12 seconds) and the removal of expanded tobacco in the blend was noted. 1/79

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BELAIR 100 (cont.)

Addition of 10% expanded tobacco resulted in a lower tobacco weight and rod density. Tar (7 to 8 mg) and CO (10 to 11 mg) increased as a result of a decrease in filter ventilation (37 to 24%). 11/80

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight. 3/81

Tar (10.2 to 8.8 mg), nicotine (0.81 to 0.74) and CO (12.0 to 10.2 mg) decreased - increased ventilation (23 to 34%). 9/82

Tar (9.2 to 7.5 mg), nicotine (0.67 to 0.58 mg), CO (8.0 to 6.6 mg) and menthol (0.36 to 0.32 mg) decreased - increased ventilation (36 to 45%). 9/84

Test marketed in Illinois as a branded generic. This cigarette is packaged in a green and white pack and delivers 15 mg tar, 1.2 mg nicotine and 0.6 mg smoke menthol. 3/89

BELAIR LIGHTS 15

Test marketed in Illinois as a branded generic. This cigarette delivers 10 mg tar, 0.9 mg nicotine and 0.5 mg smoke menthol. 3/89

BELAIR LIGHTS 100

Test marketed in Illinois as a branded generic. This cigarette delivers 10 mg tar, 0.9 mg nicotine and 0.5 mg smoke menthol. 3/89

BREEZE 85

Introduced - test market - king size mentholated, in soft pack - similar to Kool. 5/63

Discontinued.

CAPRI 100 (BOX)

Test marketed in Louisiana - delivers 9 mg tar and 0.7 mg nicotine - has a 17 mm circumference. 1/87

CAPRI 100 MENTHOL (BOX)

Test marketed in Louisiana - delivers 9 mg tar, 0.7 mg nicotine and 0.7 mg smoke menthol - has a 17 mm circumference. 1/87

CAPRI LONGS 100

100 mm mentholated cigarette with 22 mm CA filter - Lower smoke menthol than Kool 100. 9/67

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CAPRI LONGS 100 (cont.)

Filter length (22 to 29 mm) and tipping paper length (27 to 30 mm) increased - Paper porosity changed (21 to 10 seconds) - No change in tar. 11/68

Discontinued. 12/79

CAPRI 110

Introduced a new 110 mm cigarette 24.7 mm in circumference. Tar (19 mg) and nicotine (1.5 mg); 30 mm CA filter; 35 mm tipping paper. 3/75

Discontinued. 12/79

CAPRI MENTHOL 110

Introduced a new 110 mm menthol cigarette 24.7 mm in circumference. Tar (19 mg) and nicotine (1.5 mg); 30 mm CA filter; 35 mm tipping paper. 3/75

Discontinued. 12/79

CAPRI 120 (BOX)

Test marketed in New Orleans, LA - delivers 13 mg tar and 0.9 mg nicotine - has a 17 mm circumference. 11/88

CAPRI MENTHOL 120 (BOX)

Test marketed in New Orleans, LA - delivers 12 mg tar, 0.8 mg nicotine and 1 mg smoke menthol - has a 17 mm circumference. 11/88

CHEVRON 85

Introduced - test market - king size filter, in soft pack - similar to Viceroy. 3/63

Discontinued.

CORONET 85 (W)

Introduced - king size, nonfilter in new aluminum foil wrapper - similar to Raleigh plain end. 10/62

Discontinued.

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DOVER LONGS 100

Introduced - 100 mm cigarette with 22 mm CA filter. 2/67

Tar (4 mg) and nicotine (0.4 mg) reduced by changes in the filter and in the blend. 11/67

Discontinued. 12/68

ELI CUTTER 70 (WF)

Introduced in Sacramento, CA and Denver, CO - delivers 21 mg tar and 1.3 mg nicotine - packed in a black pack. 11/84

Discontinued.

ELI CUTTER 80 (BOX)

Introduced in Sacramento, CA and Denver, CO - delivers 18 mg tar and 1 mg nicotine - packed in a black pack - micro-mechanical ventilation system. 11/84

Discontinued.

ELI CUTTER 85

Introduced in Sacramento, CA and Denver, CO - delivers 18 mg tar and 1 mg nicotine - packed in a black pack - micro-mechanical ventilation system. 11/84

Reintroduced in a red package in Oklahoma - delivers 16 mg tar, 1.1 mg nicotine. 9/86

ELI CUTTER LIGHTS 85

Test marketed in Oklahoma - packaged in a beige pack. This cigarette delivers 11 mg tar and 0.9 mg nicotine. This brand contains a new type of reconstituted tobacco that is a cast sheet material containing diammonium phosphate. 9/86

FACT 85

Test marketed - CA filter with a pocket in the middle containing yellowish granules identified as Duolite - Tar (14 mg) and nicotine (1.0 mg) deliveries. 7/75

Cigarette paper changed to mechanically perforated with citrate as paper component. Tipping paper increased from 30 to 32 mm. 4/76

Introduction of Mauni ventilation (20%) resulted in lower tar delivery (14 to 11 mg). 7/77

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FACT 85 (cont.)

Re-introduced with new packaging and lower tar (9 mg) and nicotine (0.7 mg) deliveries. Lower deliveries accomplished using more efficient filter and higher level of ventilation (30%). Continues to utilize "Duolite" granules in filter.

9/77

Discontinued.

12/77

FACT MENTHOL 85

Menthol - test marketed CA filter with a pocket in the middle containing yellowish granules identified as Duolite. Tar (13 mg) and nicotine (0.9 mg) deliveries. Cigarette paper - mechanically perforated with citrate as paper component.

4/76

Introduction of Mauni ventilation (30%) resulted in lower tar delivery (13 to 11 mg).

7/77

Re-introduced with new packaging and lower tar (9 mg) and nicotine (0.7 mg) deliveries. Lower deliveries accomplished using a more efficient filter and higher level of ventilation (30%). Continues to utilize "Duolite" granules in filter.

9/77

Discontinued.

12/77

PIESTA 80 (SOFT PACK)

Test marketed in southern California - manufactured in Mexico - delivers 14 mg tar and 0.6 mg nicotine.

3/85

CLAIR 100

Plain - 100 mm slim cigarette with 27 mm CA filter

2/70

Discontinued.

CLAIR MENTHOL 100

Menthol - 100 mm slim cigarette with 27 mm CA filter.

2/70

Discontinued.

HALLMARK 85

Plain - New cigarette designed to give uniform smoke deliveries from first puff to last puff - The cigarette paper is coated with sodium chlorate at evenly spaced intervals.

9/70

Discontinued.

12/70

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HALLMARK MENTHOL 85

Menthol - New cigarette designed to give uniform smoke deliveries from first puff to last puff - The cigarette paper is coated with sodium chlorate at evenly spaced intervals.

9/70

Discontinued.

12/70

HALLMARK 100

Introduced - test market - packaged in a slide and shell box with an automatic top opening device and delivers 24 mg tar. Blend contains no reconstituted tobacco or expanded stems; filter contains modified ion exchange resin (Duolite).

7/76

Discontinued.

HALLMARK MENTHOL 100

Introduced - test market - a mentholated version of Hallmark 100 cigarettes. Delivers 23 mg tar.

8/76

Discontinued.

KENTUCKY KING 85

Introduced, king size. "All tobacco filter."

5/60

Phosphate treated paper.

3/61

Increased TPM and nicotine deliveries achieved by slower static burning and increased alkaloids.

2/62

Discontinued.

12/62

KIM SLIM 100 (BOX) 25's

Test marketed in Hawaii and Nashville, Tennessee - delivers 9 mg tar and 0.7 mg nicotine - has a 94 mm length.

7/86

KIM SLIM 100 MENTHOL (BOX) 25's

Test marketed in Hawaii and Nashville, Tennessee - delivers 9 mg tar, 0.7 mg nicotine and 0.5 mg smoke menthol - has a 94 mm length.

7/86

KOOL 10 (BOX)

Introduced in flip-top box - Similar to Kool 85.

5/74

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KOOL 15

New filter, lower RTD.	6/60
Filter fiber denier and weight decreased, no change in filtration efficiency.	6/61
Filter length increased (17 to 20 mm); higher filter efficiency.	3/62
Carbowax (5%) observed in the filter.	12/63
Filler alkaloids increased resulting in higher nicotine delivery.	2/64
TPM (2 mg) and nicotine deliveries decreased as result of change in paper additive, phosphate to citrate. 3/64	
Nicotine delivery decreased by decreasing filler alkaloids.	12/64
Filler alkaloids increased.	4/65
Fiber shape changed from I to Y. 3/66	
TPM (1 mg) increased.	6/66
TPM (2 mg), nicotine (0.2 mg), and menthol in smoke (0.1 mg) decreased by increasing paper porosity.	10/66
TPM (2 mg) decreased as result of a blend change.	8/67
Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased, no change in smoke deliveries.	4/68
Tar (1 mg) and nicotine (0.1 mg) were reduced correlating with a lower filler rod TPM.	7/68
Menthol in smoke and filler increased.	1/69
Reconstituted tobacco (8 to 12%) and RRS (11 and 15%) increased.	4/70
Addition of expanded RRS to blend replacing portion of regular RRS.	2/72
Tar (0.6 mg) and nicotine (0.05 mg) lower due to faster static burning time.	10/72
Reconstituted tobacco increased 11 to 15%.	5/73
Tipping paper length increased 25 to 26 mm - No other changes.	7/73
Menthol in smoke content increased by increasing filler menthol.	3/76

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KOOL 85 (cont.)

Higher CO (14 to 16 mg) - change to a less porous cigarette paper (14 to 20 sec.) with a higher level of paper component (0.2 to 0.7%).

11/85

KOOL 85 25's

Test market - similar to Kool 85 - eight packs in a carton for a total of 200 cigarettes

11/85

Discontinued.

9/86

KOOL INTERNATIONAL MENTHOL 85

Test marketed - This brand is packaged in the princess pack. Tar (10 mg). Ventilation consists of 1 row of Laser perforated holes. This cigarette previously available only in foreign markets.

8/79

Discontinued.

KOOL MILDS 80 (BOX)

Distributed nationally - delivers 11 mg tar, 0.8 mg nicotine and 0.6 mg smoke menthol.

7/86

KOOL MILDS 85

Introduced - Tar (16.5 mg) and nicotine (1.4 mg) - Very similar to Kool 85 except for total alkaloids. Regular and expanded RRS in blend (11%).

4/72

Marketed nationally in July, 1972, with longer filter (21 to 25 mm) and increased tipping paper length (29 to 30 mm). Increase of regular and expanded RRS (11 to 18%). These changes resulted in lower tar (3 mg) and nicotine (0.3 mg).

7/72

Lower total alkaloids (0.3%) and nicotine delivery (0.2 mg).

5/73

Blend change - Lower alkaloids and filler rod TPM resulting in lower tar (2 mg) and nicotine (0.2 mg). Lower puff count and higher RTD noted.

8/74

The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD.

10/78

A lower tar (13 to 11 mg) achieved by introduction of filter ventilation (19%) and a change to a more porous cigarette paper. A blend change indicated by a high filler alkaloid content and lower reducing sugars.

10/79

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KOOL MILD 85

Expanded tobacco eliminated (11 to 0%) - increase in tobacco weight. 3/81

From expanded tobacco has been added (11%) resulting in lower tobacco weight (0.692 to 0.670 g). 7/81

Higher CO delivery correlated with a less porous cigarette paper - longer tipping paper length. 1/86

KOOL MILD 100

Test marketed - A brand extension of Kool Milds 85. Tar (13 mg) and nicotine (1.2 mg) with 19% ventilation. Blend contains 7% expanded tobacco. Ventilation achieved by a band of electrostatic perforation. 8/79

Expanded tobacco eliminated (11 to 0%) - increase in tobacco weight. 3/81

From expanded tobacco has been added (11%) resulting in lower tobacco weight (0.884 to 0.829 g). 7/81

Change to a less porous cigarette paper and an increased ventilation noted - no changes in smoke deliveries. 1/86

KOOL MATTMILD 85

Introduced - test market - delivers 14 mg tar. Similar to Fast 85 and Vanguard 85 cigarettes. Filter containing Duolite granules described as an "Actron" filter. 8/76

Discontinued.

KOOL 100

100 mm mentholated cigarette with 22 mm CA filter. 9/67

Changes in blend, filter length (22 to 25 mm), and tipping paper (27 to 30 mm) did not alter smoke deliveries. 8/68

Menthol in smoke and filter increased. 1/69

Addition of expanded RRS to blend replacing portion of regular RRS. 2/72

Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Lower tar (1 mg) and nicotine (0.1 mg). 2/73

Reconstituted tobacco content increased (11 to 15%). 9/73

Menthol in smoke content increased by increasing filler menthol. 3/76

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KOOL 100 (cont.)

Lower tar (18 to 17 mg) resulting from decrease in filler rod TPM delivery. An increase in total RTD was also observed.

5/78

Level of reconstituted tobacco increased from 10 to 16% and level of expanded stems decreased from 17 to 14%.

9/78

Lower tar (16 to 15 mg) and nicotine (1.2 to 1.1 mg) deliveries resulting from a change to a more porous cigarette paper (22 to 12 sec.).

12/78

The addition of 8% expanded tobacco was noted - This change resulted in a lower tobacco weight and rod density.

9/80

Higher tar (14 to 16 mg) and nicotine (0.9 to 1.1 mg) deliveries - increased filler rod TPM, tobacco weight and total alkaloid content - higher smoke menthol (0.4 to 0.5 mg) due to increased menthol in the filler and filter.

11/85

KOOL LIGHTS 85

Name changed from Kool Super Lights 85. Ventilation system changed to two rows of mechanical perforation. These cigarettes are lower in tar (8.6 mg) because of a more efficient filter and higher ventilation level.

9/81

Test marketed in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in smoke deliveries.

1/89

KOOL LIGHTS 100

Name changed from Kool Super Lights 100. Ventilation system changed to two rows of mechanical perforation. These cigarettes are lower in tar (12.3 mg) because of a more efficient filter and higher ventilation level.

9/81

Tar (11 to 10 mg), nicotine (0.9 to 0.8 mg) and CO (10 to 8 mg) decreased due to increased ventilation (28 to 38%).

5/83

Change to a less porous cigarette paper (14 to 21 seconds) was observed - no changes in smoke deliveries.

11/86

Tar, nicotine and CO decreased as a result of increased ventilation and more porous cigarette paper.

7/87

Test marketed in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in smoke deliveries.

1/89

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KOOL SUPER LIGHTS 85

Introduced - 85 mm mentholated cigarette - low tar (9 mg) and nicotine (0.7 mg) resulted primarily from filter ventilation (25%) and low available TPM filler. Mechanically perforated cigarette paper. Typical Brown & Williamson blend. Tar (9 mg) and nicotine (0.8 mg) listed on pack.

7/77

Tar (9 to 6 mg) and nicotine (0.8 to 0.6 mg) deliveries were decreased by increasing the filter ventilation and lowering the tobacco weight. Lower tobacco weight result of addition of 6% expanded tobacco. Paper porosity changed from 7 to 13 seconds. Data listed on pack as tar (7 mg) and nicotine (0.7 mg).

7/79

Discontinued.

KOOL SUPER LIGHTS 100

Introduced - 100 mm mentholated cigarette - low tar (9 mg) and nicotine (0.8 mg) achieved by filter ventilation (35%) and low available TPM filler. Typical Brown & Williamson blend. Tar (9 mg) and nicotine (0.8 mg) listed on pack.

7/77

Addition of 10% expanded tobacco resulted in a lower tobacco weight and rod density.

11/80

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on packs has been removed.

3/81

Tar (8.1 to 9.4 mg), nicotine (0.65 to 0.72 mg) and CO (9.9 to 12.2 mg) increase - reduced filter ventilation (32 to 24%).

4/81

Discontinued.

KOOL ULTRA 15

Introduced - test market - tar and nicotine deliveries advertised as 2 mg and 0.3 mg, respectively. The filter system is similar to that of the Barclay with mechanical perforation and four longitudinal grooves along the filter.

9/81

Filter changed from "Actron" filter (Barclay-type) to conventional cellulose acetate filter - higher total and filter R/T, lower ventilation and less porous cigarette paper were also noted. Higher smoke deliveries resulted from these changes. Higher smoke menthol correlated with increased filler and filter menthol.

11/86

Filter changed back to "Actron" (Barclay-type) filter.

7/87

Test marketed as Kool Ultra Lights in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in the filter design or smoke deliveries.

1/89

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KOOL ULTRA 100

Introduced - test market - tar and nicotine deliveries are 9.7 mg and 0.83 mg, respectively. The filter system is similar to that of the Barclay with mechanical perforation and four longitudinal grooves along the filter.

9/81

Filter changed from "Actron" filter (Barclay-type) to conventional cellulose acetate filter - higher total and filter RTD, lower ventilation and less porous cigarette paper were also noted. Higher smoke deliveries resulted from these changes. A longer filter length was observed.

11/86

Filter changed back to "Actron" (Barclay-type) filter.

7/87

Test marketed as Kool Ultra Lights in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in the filter design or smoke deliveries.

1/89

LUX 45

TPM (7 mg) and nicotine (0.5 mg) increased by decrease in filter efficiency - Filter changed from 25 mm paper to 23 mm CA.

2/66

TPM (8 mg) and nicotine (0.3 mg) decreased as a result of increase in filter efficiency. Filter changed from 25 mm CA to dual filter 12.5 mm CA and 12.5 mm paper.

12/66

TPM (2 mg) decreased as result of increased filter efficiency - Filter changed to an 18 mm/7 mm (paper/CA).

2/67

TPM (4 mg) and nicotine (0.2 mg) increased as result of a change in filter construction 12.5/12.5 mm (paper/CA) which resulted in decrease in filter efficiency.

3/67

Discontinued.

LUX FILTER 100

Lowest tar delivery of any 100 mm - Dual filter, paper inner plug, and cellulose acetate outer plug - Tar (10 mg) and nicotine (0.8 mg) data are listed on pack.

6/70

Filter changed from 25 mm dual (paper/CA) to 27 mm CA. Total and filter RTD increased.

8/73

Discontinued.

LUX 45

New flavor - lime-menthol product - Tar (14 mg) and nicotine (0.9 mg) low for B & W product.

10/71

Discontinued.

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PHOENIX 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper containing azo dyes - Circumference 21 mm - Tar (19 mg) and nicotine (1.4 mg) deliveries.

7/75

Discontinued.

PHOENIX MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper containing azo dyes - Circumference 21 mm - Tar (19 mg) and nicotine (1.4 mg) deliveries.

7/75

Discontinued.

PRINCE 85

Imported by Brown & Williamson from Denmark - manufactured by Scandinavian Tobacco International - delivers 16 mg tar and 1.3 mg nicotine. A high level of expanded stem (24%) was in the blend.

11/88

PRINCE LIGHTS 85

Imported by Brown & Williamson from Denmark - manufactured by Scandinavian Tobacco International - delivers 12 mg tar and 1.0 mg nicotine. A high level of expanded stem (24%) was in the blend.

11/88

RALEIGH 70 (FILTER)

Test marketed in southern California - manufactured in Mexico - delivers 16 mg tar and 0.8 mg nicotine.

3/85

RALEIGH FILTER 85

Lighter filter with same efficiency.

4/81

Carbonax (5%) observed in the filter.

12/63

Filler alkaloids increased resulting in higher nicotine delivery.

1/64

TPM (4 mg) and nicotine (0.2 mg) decreased as result of change in paper component, phosphate to citrate.

6/64

Fiber shape changed from I to Y.

3/66

TPM (2 mg) increased.

6/66

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RALEIGH FILTER 85

TPM (2 mg) decreased, paper porosity increased and cigarette length decreased. 2/67

Reconstituted tobacco increased, 6 to 9%. 3/67

Tar (1 mg) reduced by changes to a more porous paper and in tipping paper (24 to 29 mm). 4/68

Filter length increased (20 to 21 mm). 7/68

Reconstituted material increased, 5 to 9%. 9/68

Paper porosity changed (11 to 17 seconds) - No change in tar. 1/69

Tar (2 mg) and nicotine (0.2 mg) decreased, lower alkaloids and tobacco weight observed. 8/69

RMS increased (7 to 18%). 10/69

Addition of expanded RMS to blend replacing portion of regular RMS. 3/72

Tipping paper length increased 25 to 26 mm - No other changes. 7/73

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on pack has been removed. 3/81

Tobacco weight decreased (0.778 to 0.732 g) due to addition of 4% Freon expanded tobacco to the blend. 11/83

Tar (13.6 to 13.1 mg) and CO (16.5 to 13.8 mg) decreased - change to a more porous cigarette paper (23 to 12 sec.). 1/85

Increased expanded tobacco (4 to 10%) - decreased tobacco weight. 7/85

RALEIGH LIGHTS 85

Introduced - 85 mm version of Raleigh 85 with lower tar (13 mg) and nicotine (0.9 mg). It has 25 mm CA filter and 30 mm tipping paper. 4/73

Brand name changed from Raleigh Extra Milds 85 to Raleigh Lights 85. No other changes were noted. 10/76

Decrease in tar delivery (12 to 10 mg) resulting from introduction of filter ventilation (24%) and a change to a more efficient filter. Changed to a high alkaloid blend and replaced mechanically perforated cigarette paper with inherently porous paper. 4/78

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RALEIGH LIGHTS 85 (cont.)

Tar (9 to 8 mg) and nicotine (0.9 to 0.8 mg) deliveries lower correlating with a lower filler rod 'PM. 3/79

12% Freon expanded tobacco added to blend. 5/83

Increased amount of reconstituted material and decreased amount of expanded stems - changed to a less porous cigarette paper. 9/85

Tipping paper length increased - lower tar and nicotine deliveries and a lower puff count resulted. 3/86

Expanded tobacco removed from the blend resulting in an increased tobacco weight and rod density. 1/88

Introduced - 100 mm version of Raleigh Lights 85 with 10 mg tar and 0.9 mg nicotine. 27 mm CA filter with 24% ventilation. 8/78

Tar (7.8 to 9.8 mg), nicotine (0.68 to 0.81 mg) and CO (10.7 to 14.4 mg) increased - decrease in filter ventilation (34 to 19%) - higher RTD (4.9 to 5.6). 2/81

Tar (10 to 9 mg), nicotine (0.9 to 0.8 mg) and CO (13 to 11 mg) decreased due to increased ventilation (26 to 32%). 5/83

12% Freon expanded tobacco added to blend resulting in lower tobacco weight (.892 to .826 g/cc) and rod density (0.251 to 0.230 g/cc). Fiber denier changed (2.6/Y to 3.2/Y) resulting in lower filter RTD (4.1 to 3.3 in. H<sub>2</sub>O) - decrease in filtration efficiency (59 to 52%). Tar increased (9 to 10 mg). 1/84

Increased amount of reconstituted material and decreased amount of expanded stems - more efficient filter used. 9/85

Tar (9 to 11 mg) nicotine (0.7 to 0.8 mg) and CO (11 to 13 mg) increased - decreased ventilation (27 to 20%). 11/85

RALEIGH LIGHTS 85

Expanded tobacco removed from the blend. Higher tar, nicotine and CO deliveries resulted; longer filter length was observed (27 to 30 mm). 1/88

RALEIGH 100

100 mm cigarette with 25 mm CA filter. 8/69

Coupon on pack. 9/69

Tar (1 mg) increased correlating with a change in paper porosity (13 to 25 seconds). 3/71

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RALEIGH 100 (cont.)

Addition of expanded RKS to blend replacing a portion of regular RKS.	3/72
Tar (1.3 mg) and nicotine (0.1 mg) lower - Lower tobacco weight and rod density noted.	5/72
Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (1 mg) and nicotine (0.1 mg) decreased.	12/72
Lower tar (17 to 16 mg) resulting from decrease in filler rod TPM delivery.	5/78
Addition of expanded tobacco at the 64 level correlating with a lower tobacco weight and rod density. Lower tar (17 to 16 mg) and filler rod TPM deliveries noted.	4/79
Lower tar (16 to 15 mg) and nicotine (1.2 to 1.1 mg) resulting from a change to a more porous cigarette paper.	1/80
Tar (7.8 to 9.8 mg), nicotine (0.68 to 0.81 mg) and CO (10.7 to 14.4 mg) increased - decrease in filter ventilation (34 to 196) - higher RTD (4.9 to 5.6).	2/81
Expanded tobacco eliminated (10 to 0) - increase in tobacco weight - tar and nicotine data printed on pack has been removed.	3/81
46 Fresh expanded tobacco added to blend resulted in lower tobacco weight (0.886 to 0.831 g) and rod density (0.280 to 0.233 g/cc).	1/84

RICHLAND 85

Introduced - contains 25 cigarettes per pack - delivers 15 mg tar and 1.2 mg nicotine - similar to Viceroy 85.	9/83
National distribution.	6/85

RICHLAND LIGHTS 85

Introduced - contains 25 cigarettes per pack - delivers 11 mg tar and 0.8 mg nicotine.	9/85
National distribution.	6/85
Expanded stems removed from the blend (11% to none) - increased tobacco weight and rod density - higher filler rod TPM correlated with this change.	5/87

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RICHLAND MENTHOL 85

Introduced - contains 25 cigarettes per pack - delivers 15 mg tar, 1.1 mg nicotine, and 0.5 mg menthol - similar to Kool 85. 9/83

National distribution. 6/85

Higher CO delivery resulted from less porous cigarette paper with an increased level of paper component. 3/86

RICHLAND 100 25's

Introduced nationally - 250 cigarettes per carton - delivers 16 mg tar and 1.1 mg nicotine. 5/86

RICHLAND LIGHTS 100 25's

Introduced nationally - 250 cigarettes per carton - delivers 11 mg tar and 0.8 mg nicotine. 5/86

ST. JAMES COURT 85

Introduced in Portland, Oregon; New Orleans, Louisiana; and Phoenix, Arizona - utilizes a dual cellulose acetate filter which consists of a 7 mm formed Filtrona section and a 20 mm "Actron" section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is not typical of Brown & Williamson products. 11/84

Test market expanded to Hawaii. 6/85

ST. JAMES COURT MENTHOL 85

Introduced in Portland, Oregon; New Orleans, Louisiana, and Phoenix, Arizona - utilizes a dual cellulose acetate filter which consists of a 7 mm formed Filtrona section and a 20 mm "Actron" section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is similar to Kool Lights. 11/84

Test market expanded to Hawaii. 6/85

ST. JAMES COURT 100 (BOX)

Introduced in Portland, Oregon; New Orleans, Louisiana, and Phoenix, Arizona - utilizes a dual cellulose acetate filter with a 7 mm formed Filtrona section and a 20 mm "Actron" section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is not typical of Brown & Williamson products. 11/84

Test market expanded to Hawaii. 6/85

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ST. JAMES COURT MENTHOL 100 (BOX)

Introduced in Portland, Oregon; New Orleans, Louisiana; and Phoenix, Arizona - utilizes a dual cellulose acetate filter with a 7 mm formed Filtrona section and a 20 mm Actron section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is similar to Kool Lights.

11/84

Test market expanded to Hawaii.

6/85

SEVENTY 70

Plain - test marketed with mechanically perforated cigarette paper and 17 mm CA filter - 10 mg tar and 0.7 mg nicotine.

6/76

Discontinued.

SEVENTY MENTHOL 70

Menthol - test marketed with mechanically perforated cigarette paper and 17 mm CA filter - 10 mg tar and 0.7 mg nicotine.

6/76

Discontinued.

SPIRIT 85

Test marketed - 85 mm cigarette delivering 8 mg tar and 0.9 mg nicotine - This new brand has a high efficiency, 25 mm CA filter with 30% ventilation.

10/78

Discontinued.

SPIRIT 100

Test marketed - 100 mm cigarette delivering 9 mg tar and 1.0 mg nicotine - This new brand has a high efficiency, 27 mm CA filter with 27% ventilation.

10/78

Discontinued.

SUMMER 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper colored with azo dyes - Tar (17 mg) and nicotine (1.2 mg) deliveries - Circumference 21 mm.

9/75

Discontinued.

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SUZIES MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper colored with azo dyes - Tar (19 mg) and nicotine (1.3 mg) deliveries - Circumference 21 mm.

9/75

Discontinued.

TRAMPS 85

Plain - Introduced - Light brown cigarette paper colored with caramelized sugar. Tar (19 mg) and nicotine (1.1 mg) deliveries.

9/74

Introduced with regular cigarette paper. Lower tar and nicotine deliveries than previous sample.

10/74

Tar (19 to 16 mg) and nicotine (1.3 to 1.1 mg) decreased. Filler rod TPM decreased (36 to 31 mg). Smoke deliveries change as result of paper change.

4/75

Discontinued.

12/75

TRAMPS MENTHOL 85

Menthol - Introduced - Light brown cigarette paper colored with caramelized sugar. Tar (19 mg) and nicotine (1.1 mg) deliveries.

9/74

Introduced with regular cigarette paper. Lower tar and nicotine deliveries than previous sample.

10/74

Tar (19 to 17 mg) and nicotine (1.1 to 1.0 mg) decreased. Smoke deliveries change as result of paper change.

4/75

Discontinued.

12/75

TRAMPS 110

Introduced plain 110 mm cigarette with light brown cigarette paper colored with caramelized sugar. Circumference 24.6 mm, 30 mm CA filter, and 35 mm tipping paper.

4/75

Discontinued.

12/75

TRAMPS MENTHOL 110

Introduced menthol 110 mm cigarette with light brown cigarette paper colored with caramelized sugar. Circumference 24.6 mm, 30 mm CA filter, and 35 mm tipping paper.

4/75

Discontinued.

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VANGUARD 85

Introduced - Similar to Fast 85 cigarettes previously introduced - CA filter with pocket in the middle containing yellowish granules identified as Duolite - Tar (14 mg) and nicotine (1.0 mg) deliveries.

8/75

Discontinued.

VANGUARD MENTHOL 85

Introduced - test market - mentholated version of Vanguard 85 - Delivers 14 mg tar.

7/76

Discontinued.

VICEROY 15

"Deep Weave," more efficient filter.

8/60

Lighter, slightly less efficient filter resulted in slight increase in TPM and nicotine delivery.

6/61

Total RFD reduced 20 mm H2O by changes in plug RFD, rod circumference, tobacco weight, and paper porosity.

8/62

Filter contains carbowax (9%).

5/63

Filter length has increased from 17 to 20 mm.

8/63

Filter alkaloids increased resulting in a higher nicotine delivery.

1/64

TPM (3 mg) and nicotine deliveries decreased, a result of a more porous cigarette paper.

2/64

TPM (2 mg) increased.

6/65

TPM (2 mg) decreased as result of blend change.

8/67

TPM (1 mg) reduced by changes to a more porous paper and in tipping paper (24 to 25 mm).

4/68

Reconstituted material increased, 6 to 9%.

9/68

Tar increased (1 mg) - Change in paper porosity (11 to 18 seconds) noted.

5/69

Tar (1 mg) and nicotine (0.1 mg) decreased, amount of paper component in cigarette paper increased.

7/69

RFD increased (11 to 14%).

10/69

RFD increased (13 to 18%).

10/70

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VICEROY 85 (cont.)

Addition of expanded RKS to blend replacing portion of regular RKS.	3/72
Tipping paper length increased 25 to 26 mm - No other changes.	7/73
Package design change - Tar (15 to 17 mg) and nicotine (1.0 to 1.1 mg) deliveries increased. Blend change observed.	6/75
Tar (15.0 mg) and nicotine (1.0 mg) deliveries returned to level prior to package design change.	10/75
Lower tar (16 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries achieved by change to a more efficient filter. Changes in total and filter RTD and filter fiber denier also noted.	3/78
Addition of expanded tobacco at the 6 <sup>th</sup> level was observed. First time a Brown & Williamson product containing expanded tobacco was obtained from the market. Decrease in tobacco weight along with lower tar (14 to 13 mg) and nicotine (1.0 to 1.9 mg) deliveries resulting from the addition of expanded tobacco.	9/78
Tar increased (13.8 to 14.7 mg) due to decreased filtration efficiency (48 to 40%) and change in fiber denier (3.0 to 3.7).	3/83
Tar (18.5 to 14.2 mg) and CO (16.0 to 14.2 mg) decreased - change to a more porous cigarette paper (23 to 12 sec.).	1/85
Blend change resulted in lower level of expanded stems (13 to 9%). - dark colored reconstituted tobacco was replaced with a light colored reconstituted tobacco. The blend change increased tobacco weight. Higher smoke deliveries and a less porous cigarette paper were noted. Ventilation was added (None to 10%). This cigarette is now being sold at a generic price.	1/89

VICEROY EXTRA MILD 85

Introduced - Very similar to Viceroy Lights 85 previously test marketed by Brown & Williamson.	4/74
Tar (14 to 11 mg) and nicotine (1.0 to 0.8 mg) decreased by the introduction of Mauni ventilation at the 23 <sup>rd</sup> level. A decrease in total RTD was also noted.	1/77
Blend change resulting in higher filler rod TPM delivery. Changed to a more efficient filter and discontinued use of mechanically perforated cigarette paper. No change in tar or nicotine deliveries observed. Changed from Mauni ventilation to mechanically perforated tipping paper. Discontinued.	4/78 12/78

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VICEROY RICH LIGHTS 65

Introduced - Tar (9 mg) and nicotine (0.8 mg) with a 25 mm CA filter and 36% ventilation. Similar to Viceroy Extra Milds 65 cigarettes.

8/78

12% Freon expanded tobacco added to blend.

5/83

Name changed to Viceroy Lights.

7/85

VICEROY LIGHTS 65

Introduced - Tar (12.5 mg) and nicotine (1.0 mg), 25 mm CA filter - 30 mm tipping paper - Blend contains expanded RKS.

4/72

Increased level of reconstituted material and decreased level of expanded stems - changed to a less porous cigarette paper.

9/85

Tipping paper length increased.

5/86

Increased level of reconstituted material and decreased level of expanded stems - changed to a less porous cigarette paper.

9/85

Expanded stems removed from the blend (11% to none) - increased tobacco weight and rod density - higher filler rod TPM correlated with this change.

5/87

VICEROY 100

100 mm cigarette with 22 mm CA filter.

10/67

Tar (2 mg) and nicotine (0.1 mg) reduced by changes in filter length (22 to 25 mm), tipping paper (27 to 30 mm) and to a more porous paper (20 to 12 seconds).

8/68

Tar (1 mg) increased. Change in paper porosity (11 to 20 seconds) noted.

5/69

Tar (2 mg) and nicotine (0.2 mg) decreased, change in paper porosity (21 to 14 seconds).

6/69

RKS increased (11 to 14%).

10/69

Tar (2 mg) and nicotine (0.1 mg) were reduced correlating to lower filler rod TPM - A decrease in alkaloids and higher reducing sugars were observed - An increase in RKS was noted.

9/70

RKS increased (13 to 18%).

10/70

Tar (1 mg) increased correlating with change in paper porosity (12 to 22 seconds).

3/71

Addition of expanded RKS to blend replacing portion of

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regular RKS.	3/72
Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (2 mg) and nicotine (0.2 mg) decreased.	12/72
Package design change. Tar (16 to 17 mg) and nicotine (1.1 to 1.2 mg) deliveries increased. Blend change observed.	6/75
Decrease in tar (16 to 16 mg) and nicotine (1.3 to 1.1 mg) deliveries resulting from a change to a more porous cigarette paper.	11/77
Addition of expanded tobacco at the 7% level correlated with lower tobacco weight and rod density.	5/80
Tar (14 to 16 mg), nicotine (1.0 to 1.1 mg), filler rod TPM (27 to 29 mg) and total alkaloids (1.60 to 1.72%) increased. 9% ventilation added to brand - CO decreased (16 to 14 mg).	3/84
Blend change resulted in lower level of expanded stems (13 to 9%) - dark colored reconstituted tobacco was replaced with a light colored reconstituted tobacco. The blend change increased the tobacco weight. Higher smoke deliveries and a less porous paper were noted. Ventilation increased (8 to 17%). This cigarette is now being sold at a generic price.	1/89

#### VICEROY RICH LIGHTS 100

Introduced - 100 mm cigarette delivering 8 mg tar and 0.8 mg nicotine. 27 mm CA filter with 40% ventilation. This is a brand extension of Viceroy Rich Lights 85 cigarettes.	9/78
Tar value (8 to 9 mg) changed on pack to comply with FTC Report.	5/82
12% Fresh expanded tobacco added to blend.	5/83
Tar (11.5 to 10.2 mg) and CO (11.2 to 9.6 mg) decreased - ventilation increased (20 to 29%).	9/84
Tar (10.2 to 11.6 mg) and CO (9.6 to 11.4 mg) increased - decreased ventilation (29 to 21%).	3/85
Name changed to Viceroy Lights.	7/85

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EXCELSIOR LIGHTS 100

Increased level of reconstituted material and decreased level of expanded stems - more efficient filter. 9/85

Filter length increased - lower tobacco weight resulted - change in fiber denier - no changes in smoke deliveries. 3/86

Expanded tobacco removed from the blend resulting in an increased tobacco weight and rod density. 1/88

MINIS FILTER 85

85 mm cigarette - 20 mm CA filter - contains 25% reconstituted material. 3/87

Discontinued. 12/88

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## C. LIGGETT GROUP

ADAM 85

Introduced with 20 mm CA filter - Brown colored cigarette paper - paper colored with caramelized sugar. 7/71

Paper component in cigarette paper changed from citrate to phosphate - Tar (3 mg) and nicotine (0.3 mg) deliveries increased by this change. Package also redesigned. 10/72

Discontinued

ADAM 100

100 mm version of the 85 mm cigarette previously introduced - 29 mm CA filter. 10/72

Discontinued

CHESTERFIELD 70 (INTL)

Paper porosity increased reducing TPM by 4 mg and nicotine delivery by 0.1 mg. 10/62

Alkaloids reduced by 0.1%. 12/62

Tar (22.7 to 19.4 mg), nicotine (1.36 to 1.14 mg) and CO (12.9 to 11.0 mg) reduced - change to more porous cigarette paper (22 to 14 sec.). 2/81

Tar (19 to 18 mg) decreased due to use of perforated porous cigarette paper (7 sec.) with higher level of paper component (0.3 to 1.7%). 1/84

CHESTERFIELD 45 (INTL)

Paper porosity increased, reducing TPM by 8 mg and nicotine delivery 0.3 mg. 10/62

RTD increased (3.6 to 3.9 inches of H2O). 8/63

TPM (2 mg) and nicotine (0.1 mg) deliveries increased. 12/65

Circumference reduced, resulting in lower tobacco weight. 5/67

Tar (.3 mg) reduced by changes in type paper component, phosphate to citrate. 2/68

Coupon added to pack. 4/69

Tar (2 mg) and nicotine (0.1 mg) decreased - Reconstituted tobacco increased (6 to 11%) and RRS added to blend (4%). 9/71

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CHESTERFIELD 85 (MF) (cont.)

Addition of expanded RKS to blend replacing a portion of regular RKS. 3/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density. 6/73

Expanded stem level increased from 4 to 10%. 9/76

Tar (24.8 to 23.7 mg), nicotine (1.59 to 1.45 mg) and CO (16.0 to 13.5 mg) reduced - change to a more porous cigarette paper (22 to 13 sec.). 1/81

Tar (23.0 to 20.2 mg) and CO (15.4 to 12.4 mg) decreased due to use of perforated cigarette paper that is more porous (14 to 7 sec.) with higher level of paper component (0.4 to 1.4%). 11/83

Tar (20 to 22 mg) and CO (12 to 16 mg) increased due to a change to a less porous paper (7 to 15 sec.) with decreased level of paper component (1.4 to 0.4%). 5/84

CHESTERFIELD LIGHTS 85

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar and 0.8 mg nicotine. 11/88

CHESTERFIELD LIGHTS 100

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar and 0.8 mg nicotine. 11/88

CHESTERFIELD 101

Test marketed - 101 mm long cigarettes with 20 mm CA filter. 8/67

Tar (2 mg) reduced by increase in tipping paper (24 to 27 mm). 2/68

Tar (3 mg) reduced by changes in blend and to a more porous paper (20 to 11 seconds). 7/68

Coupon added to pack. 4/69

Reconstituted tobacco removed from blend (20 to 0%) - RKS increased (5 to 11%). 10/69

Reconstituted tobacco added to blend (0 to 19%) - RKS lowered (11 to 6%) - Tar (3 mg) and nicotine (0.2 mg) decreased. 6/70

Addition of expanded RKS to blend replacing a portion of regular RKS. 3/72

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CHESTERFIELD 101 (cont.)

Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. Fiber denier change - No change in smoke deliveries. 7/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density. 6/73

Package changed to be similar to package of Chesterfield nonfilter. 10/74

Fiber shape changed (Y to I). 3/75

Tar (1 mg) lowered by increasing filter and tipping paper lengths. Fiber denier changed from 4.5 to 3.5. 1/76

Brand name changed from Chesterfield 101 to Chesterfield Filter Longs; cigarette length decreased (100.5 to 98.6 mm). Lower tar (1 mg) and nicotine (0.2 mg) deliveries were noted. Expanded stem level increased from 4 to 10t. 9/76

Brand name changed back to Chesterfield 101. Cigarette length and smoke deliveries returned to previous level. 11/76

An increase in the filter length (27 to 30 mm) and tipping paper length (32 to 35 mm) resulted in lower tar (15.3 to 14.1 mg), nicotine (1.10 to 1.04 mg), and CO (16.6 to 15.5 mg) deliveries. 8/81

Discontinued

CHESTERFIELD FILTER 85

Introduced - King size soft pack - slow burning rate resulting in high TPM and nicotine deliveries. 4/66

Coupon added to pack. 4/69

Package changed - Similar to Chesterfield nonfilter. 1/75

Lower tar (18 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from a change to a more porous cigarette paper and a decrease in tobacco weight. 7/78

Tar (14 to 12 mg), nicotine (1.0 to 0.9 mg), and CO (14 to 12 mg) decreased due to increased filter length (21 to 25 mm) and tipping paper length (26 to 30 mm). 9/83

Discontinued

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CHESTERFIELD MENTHOL FILTER 85

Introduced - king size in soft pack - slow burning rate resulting in high TPM and menthol deliveries. 4/66

TPM (3 mg), nicotine (0.1 mg), and menthol in smoke (0.1 mg) decreased as result of changes in cigarette paper and filter efficiency. 3/67

Coupon added to pack. 4/69

Addition of reconstituted tobacco (0 to 19%), RRS decreased (15 to 3%). Tar (3 mg) and nicotine (0.1 mg) decreased. 6/70

Discontinued 12/74

DECade 85

Introduced - Test market - Lower tar (6 mg) and nicotine (0.5 mg) deliveries achieved by filter ventilation. Filter contains a 14 mm polyethylene tube insert similar to the one used on L & M Flavor Lights 85. 10/76

Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries. 10/80

Discontinued

DECade MENTHOL 85

Introduced - low tar (6 mg) and nicotine (0.5 mg) achieved by high filter ventilation (59%). Has same filter and blend as Decade 85 cigarettes. Tar (5 mg) and nicotine (0.5 mg) listed on pack. 3/77

Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries. 10/80

Discontinued.

DECade 100

Introduced - 100 mm cigarette - 5 mg tar and 0.4 mg nicotine with a 27 mm CA filter and 63% ventilation. High level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes. 8/78

Discontinued.

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DEVON 15

Introduced - King size mentholated cigarette with "Lark-type" filter - Filter has gas phase activity.

5/64

Discontinued.

12/65

DORADO 15

Test market - New Mexico - delivers 14 mg tar and 1 mg nicotine.

7/83

DUXIE 15

Dropped from C.I. History of Brand in C.I. 12/65.

1/66

EAGLE 15

Plain - test marketed - similar to L & M 85 cigarettes. Sell for \$0.05 less per pack than any other 85 mm product.

1/76

Discontinued.

EAGLE MENTHOL 15

Menthol - test marketed - similar to L & M 85 cigarettes. Sell for \$0.05 less per pack than any other 85 mm product.

1/76

Discontinued.

EVE LIGHT 100

Introduced 100 mm cigarette delivering 9 mg tar and 0.7 mg nicotine. 27 mm CA filter with 45% ventilation and a high level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

8/78

Replaced by Eve Slim Lights 100 (Box).

6/83

EVE SLIM LIGHTS 100 (BOX)

Replaces Eve Light 100 - delivers 12 mg tar and 1 mg nicotine - 22.7 circumference.

6/83

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EVE LIGHT MENTHOL 100

Introduced 100 mm menthol cigarette delivering 9 mg tar and 0.7 mg nicotine. 27 mm CA filter with 45% ventilation and a high level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

8/78

Replaced by Eve Slim Lights Menthol 100 (Box).

6/83

EVE SLIM LIGHTS MENTHOL 100 (BOX)

Replaces Eve Light Menthol 100 - delivers 12 mg tar and 1 mg nicotine - 22.7 circumference.

6/83

EVE 100

Plain - 100 mm cigarettes in new pack with floral design - Tipping paper also has floral design.

6/70

Addition of expanded RKS to blend replacing a portion of regular RKS.

3/72

Change in filter length (20 to 25 mm) and fiber denier (3.4 to 4.5) - Change in alkaloids, reducing sugars, and filler rod TPM - Lower tobacco weight and rod density noted.

4/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.

6/73

Cigarette length increased (97.8 to 98.7 mm).

10/74

Fiber shape changed (Y to I).

3/75

Design changed on tipping paper, package and carton.

5/75

Tipping paper length increased from 30 to 32 mm.

1/76

Tar (2 mg) and nicotine (0.1 mg) decreased by increasing filter length from 25 to 27 mm and increasing paper porosity.

3/76

Expanded stem level increased from 4 to 10%.

9/76

EVE MENTHOL 100

100 mm cigarette in new pack with floral design - Tipping paper also has a floral design.

6/70

Addition of expanded RKS to blend replacing a portion of regular RKS.

3/72

Change in filter length (20 to 25 mm) and fiber denier (3.3 to 4.6). No change in smoke deliveries.

12/72

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EVE MENTHOL 100 (cont.)

Reconstituted tobacco content increased (22 to 26) - Resulted in lower total alkaloids, tar (1 mg) and nicotine (0.1 mg). 5/73

Expanded tobacco added to blend (74) resulting in lower tobacco weight and rod density. 6/73

Fiber denier (3.4 to 4.5) and fiber shape (X to I) changed. Filter weight increased. No change in smoke deliveries. 4/75

Design changed on tipping paper, package and carton. 5/75

Tipping paper length increased from 30 to 32 mm. 1/76

Tar (3 mg) and nicotine (0.1 mg) decreased by increasing filter length (25 to 27 mm) and increasing paper porosity. Menthol in smoke decreased (0.6 to 0.5 mg). 4/76

Expanded stem level increased from 4 to 10%. 9/76

EVE 120

Plain - test marketed - 21 mm circumference and filter ventilation of 50% - white cigarette paper and packaged in a crush-proof box. 3/76

EVE MENTHOL 120

Menthol - test marketed - 21 mm circumference and filter ventilation of 50% - white cigarette paper and packaged in a crush-proof box. 3/76

EVE ULTRA 120 (BOX)

Distributed nationally - delivers 5 mg tar and 0.5 mg nicotine. 11/88

EVE ULTRA MENTHOL 120 (BOX)

Distributed nationally - delivers 6 mg tar, 0.6 mg nicotine and 0.4 mg smoke menthol. 11/88

L & M 80 (BOX)

Introduced - delivers 25 mg tar. 12/57

Tobacco weight decrease. 12/62

Tobacco weight decrease (0.707 to 0.675 g) - tar decreased (16.5 to 14.3 g). 7/78

Tar decreased (13.2 to 12.4 mg) due to filter length increase (20 to 21 mm). 1/82

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LINE 85

Citrate to phosphate paper. 10/60

Lighter, dull cellulose acetate filter on all sizes, no changes in efficiency. 9/60-3/61

Faster burning, more porous paper, reduced TPM (5 mg) and nicotine (0.2 mg). 9/62

Alkaloids reduced gradually. 9-12/62

TPM reduced by 1.5 mg - Alkaloids and nicotine delivery also reduced. 4/63

Filler alkaloids increased slightly and fiber denier changed from 2.5 to 2.0 on all sizes. 4/63

Fiber shape (cloverleaf to I) and fiber denier (2.0 to 2.3) changed. 9/63

TPM and nicotine deliveries increased - Filler alkaloids also increased. 12/63

TPM increased - less efficient filter resulting from change in fiber shape and denier. 4/66

Filter length increased, 17 to 20 mm. 10/66

Tar (2 mg) and nicotine (0.1 mg) decreased by lower filler rod TPM. 10/67

Tar (2 mg) and nicotine (0.1 mg) decreased by lower filler rod TPM. 12/67

Nicotine delivery (0.1 mg) increased by higher alkaloids. 7/70

Tar (1 mg) and nicotine (0.1 mg) decreased. Lower tobacco weight and rod density observed. 1/71

Addition of expanded RRS to blend replacing a portion of regular RRS. 3/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density. 6/73

Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased. Fiber denier (3.5 to 3.0) and fiber shape (Y to I) changed. Alkaloids decreased. Nicotine delivery lower (1.3 to 1.2 mg). 3/75

Tipping paper length increased from 23 to 26 mm. 1/76

Expanded stem level increased from 4 to 10%. 9/76

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L & M 15 (cont.)

A change in paper component from phosphate to citrate reduced the tar (18 to 17 mg) and filler rod TPM (34 to 31 mg). Faster static burning time also noted. 2/77

Lower tar (17 to 15 mg) and nicotine (1.1 to 0.9 mg) deliveries resulting from decrease in tobacco weight and a more porous cigarette paper. Levels of expanded tobacco and expanded stems in blend were increased. 3/78

Increase in filter length (21 to 25 mm) and tipping paper (26 to 30 mm). Filter fiber denier (3.0/Y to 3.7/Y) and paper porosity (13 to 16 sec.) were changed. 12/81

Lower total RTD resulted due to change to mechanically perforated cigarette paper. Increased paper component. 3/83

Decreased paper component (1.4 to 0.5g) and less porous paper (7 to 12 sec.) - decreased puff count (7.6 to 6.6) - Lower tobacco weight (0.650 to 0.619 mg) and rod density (0.223 to 0.210 g/cc) were noted - higher CO delivery (12 to 13 mg). 5/85

Change to perforated cigarette paper. 5/86

L & M LIGHTS 30'S

Distributed in North Carolina - deliver 13 mg tar, 1.2 mg nicotine and has a 23 mm circumference - 30 cigarettes per pack - packed in an 8-7-7-8 configuration - 300 cigarettes per carton. 9/87

L & M FLAVOR LIGHTS 85

Introduced - test market - Low tar (8 mg) and nicotine (0.6 mg) deliveries achieved by filter ventilation. Blend contains no reconstituted tobacco or added stem. Filter contains a 14 mm polyethylene tube originating at the tobacco rod end. 9/76

Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries. 10/80

Discontinued.

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L & M LONG LIGHTS 100

Test marketed - Low tar (8 mg) and nicotine (0.7 mg) deliveries achieved by filter ventilation (56%). Blend contains no reconstituted tobacco or added stem. 27 mm CA filter contains a polyethylene tube insert. Tar listed on package as "Only 8 mg tar."

3/77

Filter change by removing polyethylene tube insert and increasing fiber denier. No change in smoke deliveries.

10/80

Increase in filter length from (27 to 30 mm) and a change to a smaller fiber denier were noted. No change in smoke deliveries.

11/80

L & M LONG LIGHTS MENTHOL 100

Introduced - Tar (8 mg) and nicotine (0.8 mg) - Very similar in characteristics to L & M Long Lights 100.

6/80

Increase in filter length (27 to 30 mm). No change was observed in the smoke deliveries. Discontinued.

8/81

L & M 100

100 mm cigarette with 20 mm CA filter.

7/67

Tar (2 mg) and nicotine (0.2 mg) reduced by lower filler rod TFM.

10/67

Tar (1 mg) and nicotine (0.1 mg) reduced by a change to a more porous paper.

12/67

Tipping paper increased (24 to 27 mm), no change in smoke deliveries.

3/68

Nicotine delivery (0.1 mg) increased by higher alkaloids.

7/70

Tar (1 mg) and nicotine (0.1 mg) decreased. Lower tobacco weight and rod density observed.

1/71

Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. Fiber denier changed resulting in less efficient filter. Tar (1 mg) and nicotine (0.1 mg) increased.

5/71

Addition of expanded RRS to blend replacing a portion of tobacco weight and rod density.

3/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.

6/73

Cigarette length decreased 100 to 99 mm.

9/73

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L & M 100 (cont.)

Fiber shape changed (Y to I).	3/73
Tar (2 mg) decreased resulting from increased filter and tipping paper lengths. A more porous cigarette paper was also noted.	1/76
Expanded stem level increased from 4 to 10%.	9/76
Lower tar (17 to 15 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from decrease in tobacco weight and a change to a more porous cigarette paper. Levels of expanded tobacco and expanded stems in blend were increased.	3/78
Tar (14.3 to 13.2 mg) and nicotine (1.06 to 0.99 mg) reduced - increase in tipping paper length (32 to 35 mm).	2/81
Filter length increased (27 to 30 mm) - higher filter RTD (2.5 to 2.9) - decrease in tobacco weight (0.16 to 0.18 g).	5/81
11% Freon expanded tobacco added to blend.	6/83
Tobacco weight (0.754 to 0.700) and rod density (0.227 to 0.208 g/cc) decreased due to increased amount of freon expanded tobacco in the blend (17 to 28%).	7/83
Tar (13.2 to 12.4 mg) and CO (14.7 to 13.0 mg) deliveries decreased due to the use of perforated cigarette paper that is more porous (24 to 7 sec.) with a higher level of paper component (0.4 to 1.4%).	11/83

L & M MENTHOL 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter.	2/67
Tar (3 mg) decreased as tipping paper length was increased.	11/67
Nicotine delivery (0.1 mg) increased by higher alkaloids.	7/70
Tar (2 mg) and nicotine (0.1 mg) decreased correlating with lower filler rod TPM.	11/71
Addition of expanded RRS to blend replacing a portion of regular RRS.	3/72
Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. No change in filter efficiency or smoke deliveries.	10/72
Cigarette length decreased 100 to 99 mm.	9/73
Fiber shape changed (Y to I).	4/75

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L & M MENTHOL 100 (cont.)

Lower tar (2 mg) and nicotine (0.1 mg) as result of increase in filter length and tipping paper length. Lower tobacco weight and reducing sugars content noted. 6/76

Expanded stem level increased from 4 to 10%. 9/76

Lower tar (17 to 15 mg) delivery observed. A change to a more porous cigarette paper and a reduction in tobacco weight were also noted. 7/78

Discontinued.

L & M SUPERIOR 85

Test market - Texas - delivers 14 mg tar and 1 mg nicotine - packaged in a black pack. 7/83

Discontinued.

LARK 85

Introduced - king size in soft pack - new triple filter containing special carbon granules with gas phase activity. 4/63

Carbon content increased. 4/64

TPM (2 mg) and nicotine (0.1 mg) deliveries decreased. 9/66

Fiber shape changed (I to Y) - no change in smoke deliveries. 1/68

Addition of expanded RKS to blend replacing a portion of regular RKS. 3/72

Reduction in gas phase activity - lower carbon content. 3/72

Alkaloids and reducing sugars higher - Nicotine delivery increased (0.1 mg). 5/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density. 6/73

Tar delivery increased (2 mg) - Filler rod TPM increased indicating blend change. 4/74

Tar delivery (2 mg) decreased correlating with a lower filler rod TPM. 1/76

Tar increased (1 mg) correlating with an increase in filler rod TPM. 5/76

Expanded stem level increased from 4 to 10%. 9/76

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LARK 15 (cont.)

Lower tar (17 to 15 mg) and nicotine (1.3 to 1.1 mg) deliveries resulting from a change to a more porous paper and a lower tobacco weight. An increase in expanded tobacco (5 to 7%) and a decrease in the reconstituted material (16 to 14%) correlated with the lower tobacco weight. Circumference decreased from 25.0 to 24.7 mm. 6/79

Tipping paper length increased (25 to 30 mm) - less porous cigarette paper (7 to 15 sec.) - Tar decreased (14.0 to 3.5 mg). 1/82

Filter length increased (20 to 25 mm) - outer plug of plug-space-plug increased - decrease in tobacco weight. 6/82

Increased level of expanded tobacco (17 to 23%) - decreased tobacco weight and rod density. 7/83

LARK 100

Introduced - 100 mm cigarette with CA-space-CA filter, with space containing approximately 88 mg of carbon. 9/68

Tar (1 mg) increased correlating to a change in paper porosity and slower static burning time. 4/71

Addition of expanded RRS to blend replacing a portion of regular RRS. 3/72

Alkaloids and reducing sugars higher - Nicotine delivery increased (0.1 mg). 5/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density. 6/73

Cigarette length decreased 100 to 99 mm. 9/73

Expanded stem level increased from 4 to 10%. 9/76

Increases in filter length (20 to 25 mm) and tipping paper length (28 to 30 mm) resulted in a slight reduction in tar delivery (18.7 to 18.2 mg). A lower tobacco weight was also noted. 9/77

Lower tar (18 to 16 mg) and nicotine (1.3 to 1.2 mg) deliveries resulting from a change to a more porous cigarette paper and a lighter tobacco weight. Increase in expanded tobacco (5 to 7%). 6/79

Tipping paper length increased (30 to 35 mm) - less porous cigarette paper (7 to 15 sec.) - decrease in tar (14.7 to 14.2 mg). 1/82

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LARK 100 (cont.)

Tobacco weight (0.799 to 0.765 g) decreased - increased filter length (25 to 30 mm).

7/82

Increased level of expanded tobacco (17 to 23%) - decreased tobacco weight and rod density.

7/85

LARK 85

Test marketed - low tar (8 mg) and nicotine (0.5 mg) cigarette with a 25 mm CA filter with ventilation (47%). The CA filter has a pocket containing carbon granules (14 mg). Filter similar in construction to the ones used by Brown & Williamson on products containing Duolite granules in filters. Tar listed on pack as "Only 8 mg."

6/77

Discontinued.

LARK LIGHTS 85

Test marketed - 85 mm cigarette delivering 8 mg tar and 0.6 mg nicotine - 25 mm CA filter containing charcoal granules with 40% ventilation. Blend contains 19% Freon expanded tobacco.

11/78

The elimination of filter ventilation resulted in an increase in tar (7.1 to 12.8 mg), nicotine (0.70 to 0.99 mg) and CO (6.9 to 13.8 mg) deliveries. A change in filter construction from carbon in a pocket to carbon in a plug-space-plug filter was noted. An increase in carbon content (7 to 64 mg) and a more porous cigarette paper (12 to 7 sec.) were noted. Expanded tobacco decreased (26 to 15%) and reconstituted tobacco increased (10 to 16%). This resulted in an increase in tobacco weight (0.589 to 0.640 g). The packaging was changed from white to red. These cigarettes are now similar to Lark 85.

8/81

Increased level of expanded tobacco (17 to 23%) - decreased tobacco weight and rod density.

7/85

LARK LIGHTS 100

Test marketed - 100 mm cigarette delivering 7 mg tar and 0.6 mg nicotine - 25 mm CA filter containing charcoal granules with 40% ventilation. Blend contains 19% Freon expanded tobacco.

11/78

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LARK LIGHTS 100 (cont.)

The elimination of filter ventilation resulted in an increase in tar (7.2 to 13.1 mg), nicotine (0.65 to 1.08 mg) and CO (6.9 to 13.1 mg) deliveries. A change in filter construction from carbon in a pocket to carbon in a plug-space-plug filter was noted. An increase in carbon content (6 to 65 mg) and a more porous cigarette paper (12 to 6 sec.) were noted. Expanded tobacco decreased (26 to 13g) and reconstituted tobacco increased (10 to 16g). This resulted in an increase in tobacco weight (0.717 to 0.802 g). The packaging was changed from white to red. These cigarettes are now similar to Lark 100.

8/81

Tobacco weight (0.794 to 0.762 g) decreased - increased filter length (25 to 30 mm).

7/82

Increased level of expanded tobacco (17 to 23g) - decreased tobacco weight and rod density.

7/83

Higher CO delivery (13 to 14 mg) resulted from a decreased level of paper component (1.8 to 0.6g).

3/87

MASTERPIECE 15

Introduced - King size in soft pack with "pipe tobacco blend" - High TPM and nicotine.

6/65

Discontinued.

12/65

OASIS 15

Dropped from C.I. History of Brand in C.I. 12/68.

1/68

GENX LUXURY LIGHTS MENTHOL 100

Introduced - test market - Tar (9.2 mg) and nicotine (0.74 mg). The ventilation system consists of one row of laser perforation.

7/81

Discontinued.

PYRAMID 15 (MP)

Introduced nationally - will sell for \$2.50 less per carton than generic cigarettes - delivers 21 mg tar and 1.4 mg nicotine.

1/89

PYRAMID FULL FLAVOR 15

Introduced nationally - will sell for a subgeneric price - delivers 15 mg tar and 1.1 mg nicotine - uses wood pulp cigarette paper.

9/89

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PYRAMID FULL FLAVOR 85 (MENTHOL)

Introduced nationally - will sell for a subgeneric price - delivers 15 mg tar, 1.1 mg nicotine and 0.5 mg smoke menthol - uses wood pulp cigarette paper.

9/89

PYRAMID LIGHTS 85

Introduced nationally - will sell for \$2.50 less per carton than generic cigarettes - delivers 14 mg tar and 1.1 mg nicotine.

1/89

PYRAMID FULL FLAVOR 100

Introduced nationally - will sell for a subgeneric price - delivers 16 mg tar and 1.3 mg nicotine - uses wood pulp cigarette paper.

9/89

PYRAMID FULL FLAVOR MENTHOL 100

Introduced nationally - will sell for a subgeneric price - delivers 16 mg tar, 1.3 mg nicotine and 0.5 mg smoke menthol - uses wood pulp cigarette paper.

9/89

PYRAMID LIGHTS 100

Introduced nationally - will sell for \$2.50 less per carton than generic cigarettes - delivers 14 mg tar and 1.1 mg nicotine.

1/89

PYRAMID LIGHTS MENTHOL 100

Introduced nationally - will sell for \$2.50 less per carton than generic cigarettes - delivers 14 mg tar, 1.1 mg nicotine and 0.5 mg smoke menthol.

1/89

PYRAMID ULTRA LIGHTS 100

Introduced nationally will sell for \$2.50 less per carton than generic cigarettes - delivers 6 mg tar and 0.6 mg nicotine.

1/89

ST. MORITZ 100

Plain - Test marketed - Previously marketed by Lorus & Bro. Blend contains both expanded tobacco and stems. Tar delivery is 16 mg.

7/74

Tar decreased from 19 to 16 mg.

8/76

Filter length increased 23 to 27 mm.

7/77

Tar decreased 16 to 13 mg; change to a more porous, mechanically perforated cigarette paper.

7/78

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ST. MORITZ MENTHOL 100

Menthol - Test marketed - Previously marketed by Larus & Bro. Blend contains both expanded tobacco and stems. Tar delivery is 18 mg.

7/74

Lower tar (17 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from an increase in filter length (25 to 27 mm) and a change to a more porous cigarette paper (22 to 13 seconds).

2/78

Replaced inherently porous cigarette paper with mechanically perforated paper. Decrease in tar (14.4 to 13.7 mg).

7/78

SAVVY LIGHTS 100

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar and 0.9 mg nicotine.

11/88

SAVVY LIGHTS MENTHOL 100

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar, 0.9 mg nicotine and 0.4 mg smoke menthol.

11/88

SAVVY ULTRA LIGHTS 100

Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 6 mg tar and 0.6 mg nicotine.

11/88

STRIDE 85

Value entry product distributed in Syracuse and Rochester, New York and Omaha, Nebraska. The pack is silver and burgundy. Similar to L & M 85 in smoke deliveries.

7/84

National.

1/85

STRIDE 100

Value entry product distributed in Syracuse and Rochester, New York and Omaha, Nebraska. The pack is silver and burgundy. Similar to L & M 100 in smoke deliveries.

7/84

National.

1/85

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VELLO 85

Plain - Test marketed 21 mm CA filter with a single row of ventilation holes having a center core of 8.0 Y-shape fibers and an outer periphery of 3.0 I-shape fibers - Filter system developed by Dr. Vello Norman - Tar (12 mg) and nicotine (0.8 mg) deliveries.

10/75

Cigarette re-engineered - Lower tar and nicotine as a result of a change in filter construction and blend formulation.

11/76

Discontinued.

VELLO MENTHOL 85

Menthol - Test marketed 21 mm CA filter with single row of ventilation holes having a center core of 8.0 Y-shape fibers and an outer periphery of 3.0 I-shape fibers - Filter system developed by Dr. Vello Norman - Tar (12 mg) and nicotine (0.8 mg) deliveries.

10/75

Cigarette re-engineered - Changes in filter construction and blend formulation same as for Vello 85 cigarettes.

11/76

Discontinued.

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D. LORILLARD COMPANYASPERN MENTHOL 85

Test marketed - Low tar (9 mg) and nicotine (0.8 mg) with a 25 mm CA filter containing 33% ventilation. High level of citrate in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap.

7/79

Discontinued.

ASPERN MENTHOL 100

Test marketed - Low tar (9 mg) and nicotine (0.8 mg) with a 27 mm CA filter containing 40% ventilation. High level of citrate in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap.

7/79

Discontinued.

BEECH-NUT 85 (MF)

Introduced - nonfilter, king size similar to Old Gold Straights.

7/61

Discontinued.

BISTRO 85

Introduced - test market - Delivers 11 mg tar and 1.02 mg nicotine. The filter system uses micro-mechanical perforation.

9/81

Discontinued.

BISTRO MENTHOL 85

Introduced - test market - Delivers 11 mg of tar, 1.01 mg of nicotine, and 0.35 mg menthol. The filter system uses micro-mechanical perforation.

9/81

Discontinued.

CENTURY GREAT LENGTHS 100

100 mm cigarette with 20 mm CA filter. Name and warning label printed on cellophane - no identification on package.

9/67

Tar (2 mg) reduced by increase in tipping paper (24 to 30 mm).

2/68

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CENTURY GREAT LENGTHS 100 (continued)

Tar (1 mg) and nicotine (0.1 mg) decreased - change in filter - a new 25 mm dual filter with carbon noted.

3/69

Discontinued.

DANVILLE 85

Introduced - king size filter cigarette.

4/66

Discontinued.

12/66

DANVILLE MENTHOL 85

Introduced - mentholated cigarette with 20 mm CA filter.

8/66

Discontinued.

12/66

DUNCAN 85 (NW)

Introduced - king size nonfilter - filler has a larger cut than normal domestic cigarettes.

9/65

Plastic mouthpiece added to cigarette - no filtration from mouthpiece.

11/65

Discontinued.

HARLEY DAVIDSON 85

Test market - Terre Haute, Indiana - 13 mg tar, 0.8 mg nicotine - black pack with Harley Davidson logo.

9/67

Reintroduced as a generic product in Arkansas test market - delivers 11 mg tar and 0.8 mg nicotine.

11/69

HARLEY DAVIDSON LIGHTS 85

Test marketed in Arkansas as a generic product - packaged in a black pack with a gold eagle embossed on the pack - delivers 8 mg tar and 0.7 mg nicotine.

11/69

HELMAR 80

80 mm cigarette - 17 mm CA filter - contains no RRS or reconstituted material.

4/67

Discontinued.

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HERITAGE 85

Introduced - test market - Delivers 10.9 mg tar and 0.93 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Bistro 85, Rebel 85, and Maverick 85.

11/81

Discontinued.

HERITAGE 100

Introduced - test market - Delivers 11.6 mg tar and 1.01 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Rebel 100 and Maverick 100.

11/81

Discontinued.

KENT 80

Expanded tobacco added to blend (98) - Resulted in lower tobacco weight and rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.

12/72

Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. No change in smoke deliveries noted.

4/77

Decrease in tar delivery (15 to 13 mg) resulting from introduction of filter ventilation (170). The new diluted filter is referred to on the pack as the Micronite II filter.

6/78

KENT 15

Reconstituted tobacco first observed - Lighter filter with same efficiency.

3/61

Less porous paper with no effect on TPM or nicotine deliveries.

11/61

Alkaloids reduced by 0.1%.

10/63

Fiber shape changed cloverleaf to I.

4/64

Filter length increased 17 to 20 mm.

8/64

Alkaloids and nicotine delivery increased slightly.

7/65

Alkaloids and nicotine delivery increased.

9/65

TPM increased 1 mg.

4/66

TPM decreased 1 mg by an increase in paper porosity.

6/67

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KENT 15 (continued)

Tipping paper increased 24 to 25 mm.	3/69
Reconstituted tobacco content increased (8 to 12%).	4/69
RKS decreased (8 to 4%).	10/69
Reconstituted tobacco increased 10 to 17%.	10/70
Reconstituted tobacco increased (16 to 18%), RKS decreased (6 to 2%).	9/71
RKS decreased 2 to 0%.	10/71
Alkaloids and reducing sugars increased - Nicotine delivery increased (0.1 mg).	5/72
Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.	12/72
Filter length increased (20 to 21 mm). Lower tobacco weight and rod density noted.	7/76
Lower tar (17 to 13 mg) and nicotine (1.1 to 1.0 mg) resulted from the introduction of filter ventilation (27%). New ventilated filter is referred to on pack as the Micronite II filter.	6/77
Decrease in tar delivery (13 to 12 mg) resulting from an increase in filter ventilation.	11/78

KENT MENTHOL 15

Test marketed - Different from Kent 85 plain in many characteristics.	5/71
Discontinued.	

KENT 100

Introduced - 100 mm cigarette with 20 mm CA filter.	4/67
Tar (1 mg) reduced by increasing tipping paper (24 to 27 mm).	11/67
Tar (2 mg) and nicotine (0.1 mg) reduced by increasing tipping paper (27 to 30 mm).	1/68
Tar (1 mg) and nicotine (0.1 mg) reduced by a change to a more porous paper.	5/68

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KENT 100 (continued)

RKS decreased (8 to 4).	10/69
Reconstituted tobacco increased 10 to 17%.	10/70
Fiber shape changed from X-shape to Y-shape - Filter weight decreased - Tar increased (1 mg).	9/71
Reconstituted tobacco increased 16 to 18% - RKS decreased 6 to 2%.	9/71
RKS decreased 2 to 0%.	10/71
Alkaloids and reducing sugars increased - Nicotine delivery increased (0.1 mg).	5/72
Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, puff count, and higher total RTD - Also, lower tar and nicotine deliveries noted.	12/72
Tipping paper length increased 30 to 32 mm - tar (1 mg) and nicotine (0.1 mg) decreased.	11/74
Cigarette length (99.2 to 98.3 mm) decreased. Tobacco weight (0.87 to 0.84 g) decreased.	5/75
Filter length (25 to 27 mm) increased. No change in smoke deliveries.	6/75
Cigarette length increased (98.9 to 99.3 mm).	8/76
Lower tar (19 to 15 mg) and nicotine (1.3 to 1.1 mg) resulted from a change to a more efficient filter (42-52%) and more porous cigarette paper. Higher total and filter RTD's noted.	6/77
Lower tar delivery (19 to 13 mg) resulting from introduction of filter ventilation (30%). Change to a less efficient filter was also noted. The new ventilated filter is referred as the Micronite II filter.	7/77
Decrease in filter ventilation and change to a less porous cigarette paper resulted in an increase in tar delivery (13.6 to 14.5 mg).	12/77
Decrease in tar delivery (14 to 13 mg) resulted from an increase in filter ventilation. Decrease in total RTD was noted.	8/78
Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries.	3/87

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KENT MENTHOL 100

100 mm mentholated cigarette similar to Kent 100.	6/70
Filter fiber shape changed from X-shape to Y-shape - Filter weight decreased.	8/71
Reconstituted tobacco increased 16 to 18% - RRS decreased 6 to 2%.	9/71
RRS decreased 2 to 0%.	10/71
Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and puff count. Also, lower tar and nicotine deliveries noted.	12/72
Tipping paper length increased (30 to 32 mm) - Lower tar (1 mg) and nicotine (0.1 mg).	1/73
Cigarette length (99.1 to 98.3 mm) decreased. Tobacco weight (0.84 to 0.82 g) decreased.	5/75
Filter length increased from 25 to 27 mm.	5/76
Cigarette length increased (98.3 to 99.2 mm).	8/76
Introduction of filter ventilation at the 25% level resulted in lower tar delivery (17 to 15 mg).	8/78

KENT III 85

Test marketed - 85 mm cigarette delivering 4 mg tar and 0.4 mg nicotine. Characterized by high alkaloid blend (2.8%) containing 19% Preon expanded tobacco. 25 mm dual CA filter with 63% ventilation.	11/78
Tar (3 to 2 mg) data changed on pack to comply with FTC Report.	4/82
Tar and nicotine deliveries removed from the pack.	7/83

KENT III 100

Brand extension of Kent III 85. Tar (5 mg) and nicotine (0.5 mg) deliveries. Brand characterized by a high alkaloid blend containing 19% expanded tobacco and a dual 27 mm CA filter with 51% ventilation. Ventilation achieved by 6 rows of mechanically perforated holes.	10/79
Tar (5 to 4 mg) and nicotine (0.6 to 0.5 mg) data changed on pack to comply with FTC Report.	4/82
Tar and nicotine deliveries removed from the pack.	7/83

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KENT III 100 (BOX)

Tipping decreased (35 to 34 mm) - lower tar, nicotine and CO deliveries resulted from increased ventilation. 7/87

Tar, nicotine and CO increased as a result of lower ventilation. 11/87

The tar, nicotine and CO deliveries decreased as a result of higher ventilation. A lower total RTD was noted. 1/88

Nationally introduced - similar to Kent III 100 (Soft Pack). 11/84

KENT GOLDEN LIGHTS 80 (BOX)

Introduced nationally - delivers 9 mg tar and 0.7 mg nicotine. 7/85

KENT GOLDEN LIGHTS 85

Plain - Introduced porous tipping paper with perforated plug wrap - Longest tipping paper (32 mm) of any 85 mm cigarette - Tar (9 mg) and nicotine (0.8 mg) deliveries. 11/75

Tar (9 to 8 mg) and nicotine (0.8 to 0.7 mg) deliveries decreased by increasing filter ventilation and paper porosity. Filler alkaloids content decreased. 3/76

Cigarette length increased (84.2 to 84.8 mm). Decrease in rod density and total RTD. 12/76

Cigarette length decreased (84.7 to 84.1 mm); lower tobacco weight also noted. 7/78

Lorillard changed the name of Kent Golden Lights 85 to Golden Lights 85. The product is the same; only the name has changed. 10/78

Tar (8 to 7 mg) and nicotine (0.8 to 0.7 mg) values changed on pack to comply with FTC Report. 5/82

Name changed back to Kent Golden Lights 85. 6/83

Increased tar, nicotine and CO deliveries resulted from lower ventilation. 1/86

KENT GOLDEN LIGHTS MENTHOL 85

Test marketed - similar to Golden Lights 85 - Tar (8 mg) and nicotine (0.7 mg) deliveries. 6/76

Lower tar delivery (8.7 to 7.4 mg) resulting from an increase in filter ventilation. 11/77

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KENT GOLDEN LIGHTS MENTHOL 85 (cont.)

Lorillard changed the name of Kent Golden Lights Menthol 85 to Golden Lights Menthol 85. The product is the same; only the name has changed. 10/78

Name changed back to Kent Golden Lights Menthol 85. 6/83

Tar (8 to 9 mg) and CO (8 to 9 mg) deliveries increased due to higher level of paper component (1.3 to 2.1%) - higher filler menthol (1.6 to 2.0 mg) correlated with higher smoke menthol (0.28 to 0.36 mg). 3/84

Paper component decreased (2.1 to 1.6%) - no changes in smoke deliveries. 9/84

Tar (8.7 to 8.0 mg) and CO (9.0 to 7.4 mg) decreased - increased filter ventilation (34 to 43%). 1/85

Increased tar, nicotine and CO deliveries resulted from lower ventilation. 3/86

KENT GOLDEN LIGHTS 100

Introduced - low tar (9 mg) and nicotine (0.8 mg) with 27 mm CA filter containing ventilation (40%). High level of paper component in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap. Tar (10 mg) and nicotine (0.9 mg) listed on pack. 5/77

Lorillard changed the name of Kent Golden Lights 100 to Golden Lights 100. The product is the same; only the name has changed. 10/78

Nicotine value (0.7 to 0.8 mg) changed on pack to comply with FTC Report. 5/82

Name changed back to Kent Golden Lights 100. 6/83

Tipping decreased (35 to 34 mm). 7/87

KENT GOLDEN LIGHTS 100 BOX

Introduced nationally - delivers 9 mg tar and 0.8 mg nicotine. 7/85

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KENT GOLDEN LIGHTS MENTHOL 100

Introduced - Similar to the Golden Lights 100 cigarettes. 5/77

Lorillard changed the name of Kent Golden Lights Menthol 100 to Golden Lights Menthol 100. The product is the same; only the name has changed. 10/78

Tar data changed on pack (8 to 7 mg) to comply with FTC Report. 6/82

Name changed back to Kent Golden Lights Menthol 100. 6/83

L.T. BROWN 120

Plain - Introduced 120 mm cigarettes - 30 mm CA filter. Tar (20 mg) and nicotine (1.5 mg) deliveries. Dark brown cigarette paper with pin-stripe lines. 6/75

Discontinued.

L.T. BROWN MENTHOL 120

Menthol - Introduced 120 mm cigarettes - 30 mm CA filter. Tar (20 mg) and nicotine (1.5 mg) deliveries. Dark brown cigarette paper with pin-stripe lines. 6/75

Discontinued.

LUKE 85

Test marketed - new 85 mm "full flavor" cigarette - Blend contains expanded tobacco (7%). 1/74

Discontinued.

MAVERICK 85

Test marketed - High alkaloid blend (2.0%) and nicotine delivery (1.6 mg) for Lorillard product - 20 mm CA filter. 11/71

Alkaloids decreased - Sugars increased - Tar (2 mg) and nicotine (0.1 mg) reduced - Filler rod TPM reduced (3 mg). 5/72

Test marketed in Washington State - 85 mm - tar (10.3 mg) and nicotine (0.86 mg) - filter ventilation by band of 10 holes. 5/81

Discontinued.

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MAVERICK 100

Test marketed in Washington State - 100 mm, tar (10.6 mg) and nicotine (0.91 mg) - filter ventilation by band of MP holes.

5/81

Discontinued.

MAX SLIM LIGHTS 100 (BOX)

Introduced - Tar (10 mg) and nicotine (0.9 mg) - two rows mechanical perforation (32% ventilation) - similar to Virginia Slims Lights 100.

2/82

Discontinued.

MAX SLIM LIGHTS MENTHOL 100 (BOX)

Introduced - Tar (10 mg), nicotine (0.9 mg), and menthol (0.39 mg) - Two rows of mechanical perforation (32% ventilation) similar to Virginia Slims Lights Menthol 100.

2/82

Discontinued.

MAX 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter - white cigarette paper - Tar (16 mg) and nicotine (1.2 mg) deliveries.

7/75

MAX MENTHOL 120

Menthол - Introduced 120 mm cigarette with 30 mm CA filter - white cigarette paper - Tar (16 mg) and nicotine (1.2 mg) deliveries.

7/75

NEWPORT 80 (BOX)

Filter length (17 to 20 mm) and tipping paper length (22 to 24 mm) increased. Tar (18 to 16 mg) and nicotine (1.2 to 1.1 mg) deliveries decreased.

2/75

NEWPORT 80 (NON-MENTHOL-BOX)

Test marketed in Penn. - 80 mm, non-mentholated, tar (11.8 mg) and nicotine (1.04 mg) - filter ventilation by band of MP holes.

4/81

Discontinued.

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NIEPORT 85

Less porous paper with no effect on TPM or nicotine delivery.	12/61
Alkaloids decreased by 0.2%.	6/63
Increases observed in TPM and nicotine deliveries - Blend change indicated by increases in total alkaloids.	12/63
Nicotine delivery and filler alkaloids increased.	4/63
TPM and nicotine increased - less efficient filter - change in filter fiber denier.	1/66
Alkaloids and nicotine delivery decreased.	7/66
Filter length increased (17 to 20 mm).	1/67
RKS content increased 8 to 12%.	4/67
Tar (1 mg) and nicotine (0.1 mg) lower, no other changes noted.	7/68
Reconstituted material increased, 8 to 13%.	9/68
Package design change.	10/68
Color of tipping paper changed from white to cork.	11/68
Tar (2 mg), nicotine (0.1 mg), and menthol delivery (0.15 mg) decreased, amount of paper component increased, faster static burning time, filler menthol lower.	8/69
Blend change, higher alkaloids and lower sugars - more porous cigarette paper. No change in smoke deliveries.	11/69
Reconstituted tobacco increased 11 to 16% - RKS decreased 9 to 4%.	10/70
Reconstituted tobacco increased 16 to 18% - RKS decreased 6 to 0%.	9/71
Fiber shape changed X to Y.	11/71
Tar delivery (1.5 mg) and filler rod TPM (2 mg) decreased - Alkaloids increased.	5/72
Tar (1 mg) and nicotine (0.2 mg) increased - Changes noted in total alkaloids and paper porosity. Fiber shape and denier change correlating with a more efficient filter.	8/72

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NEWPORT 85 (cont.)

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted. 12/72

Tar (2 mg) and nicotine (0.1 mg) deliveries were higher - Increase in filler rod TPM and filler alkaloids content. 5/76

Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. 12/76

NEWPORT 85 25's

Test marketed in Pennsylvania - similar to Newport 85 - 200 cigarettes per carton - eight packs per carton. 7/85

Test market expanded - all East Coast. 3/86

NEWPORT 85 (NON-MENTHOL-BOX)

Test marketed in Penn. - 85 mm, non-mentholated, tar (13 mg) and nicotine (1.08 mg) - filter ventilation by band of MP holes. 4/81

Discontinued.

NEWPORT 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter. 6/67

Tar (3 mg) and nicotine (0.2 mg) reduced by increase in tipping paper length (24 to 30 mm). 7/68

Filter length increased 20 to 25 mm, no change in smoke deliveries. 9/68

Tar (3 mg) increased - Filter length (20 to 25 mm) and fiber denier change - Also, tipping paper changed from white to cork. 11/68

Menthol in smoke and filler decreased. 9/69

Blend change, higher alkaloids and lower sugars - more porous cigarette paper - No change in smoke deliveries. 11/69

Reconstituted tobacco increased 11 to 16%. 10/70

RKS decreased 7 to 3%. 9/71

RKS decreased 3 to 0%. 10/71

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NEWPORT 100 (cont.)

Tar (2 mg) and nicotine (0.3 mg) were increased by changes in total alkaloids and paper porosity - Fiber shape and denier changed. 8/72

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, puff count, and higher total RTD - Also, lower tar and nicotine deliveries noted. 12/72

Blend change - Higher alkaloids and increased filler rod TPM delivery resulting in higher tar (1 mg) and nicotine (0.1 mg). 7/74

Tipping paper length (30 to 32 mm) increased. Tar (20 to 19 mg) and nicotine (1.4 to 1.3 mg) deliveries decreased. 2/75

Cigarette length (99.2 to 99.3 mm) decreased. Lower tobacco weight noted. No change in smoke deliveries. 4/75

Increase in tar (1 mg) and nicotine (0.1 mg) resulting from a change to a less porous paper - Filter length increased from 25 to 27 mm. 11/75

Tar (2 mg) and nicotine (0.1 mg) deliveries were higher - Increase in filler rod TPM and filler alkaloids content. 5/76

Cigarette length increased (99.2 to 99.3 mm). 12/76

Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries. 3/87

NEWPORT 100 25's

Test marketed in Pennsylvania - similar to Newport 100 - 200 cigarettes per carton - eight packs per carton. 7/85

Test market expanded - all East Coast. 3/86

Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries. 3/87

NEWPORT 100 (BOX)

Test marketed in Connecticut - tar 20 mg, nicotine 1.6 mg. 6/84

Discontinued.

NEWPORT LIGHTS 80 (BOX)

Test marketed - Tar (8 mg) and nicotine (0.7 mg) - Low delivery result of 33% filter ventilation with porous tipping paper. Similar to physical characteristics and blend composition of Newport Lights 85. 3/80

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NEWPORT LIGHTS 85

Test marketed - low tar (10 mg) and nicotine (0.8 mg). Characterized by a 25 mm CA filter with ventilation (27%) and a high level of paper component in a fast burning cigarette paper. Ventilation system utilizes porous tipping paper.

5/77

Increased tar and CO deliveries resulted from lower ventilation.

1/86

NEWPORT LIGHTS 100

Introduced - nationally - Delivers 9 mg tar, 0.78 mg nicotine, and 0.36 mg of menthol. The low delivery is achieved by using porous tipping paper.

9/81

Increased tar, nicotine and CO deliveries resulted from lower ventilation - higher total RTD resulted.

1/86

Decreased tar, nicotine and CO deliveries resulted from higher ventilation - lower total RTD resulted.

3/86

Tar (10 to 9 mg), CO (9 to 7 mg) and smoke menthol (0.4 to 0.3 mg) deliveries decreased as a result of increased ventilation (37 to 44%) - A lower total RTD was observed (108 to 101 mm).

9/89

NEWPORT LIGHTS 100 (BOX)

Test marketed in Connecticut - tar 9 mg, nicotine 0.8 mg.

5/84

Discontinued.

NEWPORT LIGHTS MENTHOL 100

Tar (10 to 9 mg), CO (9 to 7 mg) and smoke menthol

NEWPORT SLIM LIGHTS MENTHOL 100 (BOX)

Test marketed - delivers 8 mg tar, 0.7 mg nicotine and 0.6 mg smoke menthol.

3/86

NEWPORT STRIPES 100 (BOX)

Test market - New York - delivers 11 mg tar, 0.8 mg nicotine - only non-mentholated Newport on the market.

9/87

NEWPORT STRIPES 100 MENTHOL (BOX)

Test market - New York - delivers 11 mg tar, 0.8 mg nicotine - only non-mentholated Newport on market.

9/87

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OLD GOLD 80 (BOX)

Introduced in flip-top box - Similar to Old Gold 85. 5/74  
 Discontinued.

OLD GOLD 100

Introduced - 100 mm cigarette with 25 mm CA filter. 5/69  
 Coupon added to pack. 6/69  
 Reconstituted tobacco increased 10 to 16% - RRS decreased 9 to 4%. 10/70  
 Filter length (25 to 27 mm) increased - Tipping paper length (30 to 32 mm) increased. Tar (21 to 20 mg) and nicotine (1.4 to 1.3 mg) deliveries decreased. 2/75

OLD GOLD FILTER 85

Alkaloids reduced by 0.2%, nicotine delivery decreased. 1/63  
 Nicotine delivery and filler alkaloids increased - TPM increased slightly. 4/65  
 Filter length (17 to 20 mm) and fiber denier increased - tobacco weight decreased. 5/65  
 Coupon added to pack. 1/66  
 TPM (2 mg) and nicotine (0.1 mg) deliveries increased. 7/66  
 Reconstituted tobacco content increased (9 to 12%). 5/70  
 Reconstituted tobacco increased 10 to 16% - RRS decreased 8 to 5%. 10/70  
 Reconstituted tobacco increased 16 to 19% - RRS decreased 6 to 4%. 9/71  
 Filter fiber shape (I to Y) and denier (3.6 to 3.0) changed - No change in smoke deliveries. 10/71  
 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar, and nicotine deliveries were noted. 12/72  
 Tipping paper length increased 24 to 25 mm. 9/73  
 Filter length (20 to 21 mm) and tipping paper length (25 to 26 mm) increased. 11/74

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OLD GOLD FILTER 85 (cont.)

Tar (1 mg) and nicotine (0.1 mg) increased as result of increase in filler rod TPM. 12/76

Lower tar (17 to 16 mg) and filler rod TPM deliveries observed resulting from a decrease in tobacco weight. 9/78

Coupon dropped from pack. 11/79

OLD GOLD LIGHTS 85

Introduced on test market - Low delivery (9 mg tar and 0.8 mg nicotine) cigarettes characterized by 25 mm CA filter with 34% ventilation. Ventilation achieved using porous tipping paper. Further characterized by a high level of paper component on cigarette paper. 8/77

OLD GOLD STRAIGHTS 85 (INK)

Long to king size. 5/60

OLD GOLD LIGHTS 100

Test marketed - delivers 12 mg tar and 0.9 mg nicotine. 5/85

REBEL 85

Introduced - test market - These cigarettes deliver 11.1 mg tar and 0.96 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Maverick 85. 10/81

Discontinued. 4/83

REBEL 100

Introduced - test market - These cigarettes deliver 10.9 mg tar and 0.99 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Maverick 100. 10/81

Discontinued. 4/83

REDFORD 85

Test marketed - new 85 mm "full flavor" cigarette - similar to Old Gold 85. 4/73

Discontinued.

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SATIN 100

Test marketed - delivers 11 mg tar and 0.9 mg nicotine - two rows of mechanical perforation. 6/82  
 Tipping increased (32 to 34 mm). 7/87

SATIN MENTHOL 100

Test marketed - delivers 11 mg tar, 0.9 mg nicotine and 0.39 mg menthol in smoke - two rows of mechanical perforation. 6/82  
 Tipping increased (32 to 34 mm). 7/87

SATIN 100 - COLORED PACKS

Introduced Satin 100 cigarettes in pink, yellow, and blue packs - cigarettes similar to Satin 100. 11/85

SPRING 85

Spring 85 replaced by Spring 100 in March, 1967 (History of Spring 85 in C.I. 1/72). 3/67

Discontinued.

SPRING 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter. 3/67

Tar (1 mg) reduced by increasing tipping paper (24 to 27 mm). 11/67

Tar (2 mg) and nicotine (0.2 mg) reduced by increasing tipping paper (27 to 30 mm). 1/68

Filter length increased (20 to 25 mm) - Tar increased (2 mg). 1/69

Reconstituted tobacco increased 6 to 9t - RKS decreased 8 to 5t. 10/70

Reconstituted tobacco increased 11 to 18t - RKS decreased 8 to 0t. 9/71

Expanded tobacco added to blend (9t) - Resulted in lower tobacco weight, rod density, and puff count - Also, lower tar and nicotine deliveries noted. 12/72

Cigarette length (99.2 to 98.4 mm) decreased. Tar (20 to 19 mg) and nicotine (1.1 to 1.0 mg) decreased. 3/73

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SPRING 100 (continued)

Tar (1 mg) decreased by a change in tipping paper length (30 to 32 mm). 11/75

Filter length (25 to 27 mm) and fiber denier (6.6 to 7.6 mm) increased - Filler alkaloids increased. 4/76

Cigarette length increased (98.7 to 99.3 mm). 12/76

SPRING LEMON LIGHTS 85

Test marketed in Connecticut - Delivers 9 mg tar and 0.7 mg nicotine - the lemon flavor source is citral. 5/89

SPRING LEMON LIGHTS 85 (MENTHOL)

Test marketed in Connecticut - Delivers 9 mg tar, 0.7 mg nicotine and 0.4 mg smoke menthol - the lemon flavor source is citral. 5/89

SPRING LEMON LIGHTS 100

Test marketed in Connecticut - Delivers 11 mg tar and 0.8 mg nicotine - the lemon flavor source is citral. 5/89

SPRING LEMON LIGHTS 100 MENTHOL

Test marketed in Connecticut - Delivers 11 mg tar, 0.8 mg nicotine and 0.5 mg smoke menthol - the lemon flavor source is citral. 5/89

TRIUMPH 85

Test marketed - 85 mm cigarette delivering 4 mg tar and 0.4 mg nicotine. Characterized by high alkaloid blend (2.8%) containing 19% Freon expanded tobacco. 25 mm dual CA filter with 60% ventilation. 11/78

TRIUMPH MENTHOL 85

Test marketed - 85 mm menthol cigarette delivering 4 mg tar and 0.4 mg nicotine. Characterized by high alkaloid blend (2.8%) containing 19% Freon expanded tobacco. 25 mm dual CA filter with 60% ventilation. 11/78

Tar (5 to 4 mg) and nicotine (0.6 to 0.5 mg) data changed on pack to comply with FTC Report. 5/82

TRIUMPH 120

Test marketed in New York - 100 mm, tar (4.7 mg) and nicotine (0.56 mg) - 6 rows of MP ventilation holes. 3/81

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TRIUMPH MENTHOL 100

Test marketed in New York - 100 mm, tar (4.9 mg) and nicotine (0.58 mg) - 7 rows of MP ventilation holes. 3/81

TRUE 85

Introduced - king size filter cigarette with dual filter consisting of 10 mm CA and 10 mm polyethylene mouthpiece. 4/66

TPM decreased, 2 mg by increasing filter ventilation. 10/66

Tar decreased (1 mg) - A lower tobacco weight and filler rod TPM noted. 11/68

Reconstituted tobacco increased 10 to 14% - RKS decreased 6 to 3%. 10/70

Reconstituted tobacco increased 13 to 17% - RKS decreased 6 to 2%. 9/71

RKS decreased 2 to 0%. 10/71

Fiber shape changed C to Y-shape - No change in deliveries. 11/72

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted. 12/72

Filter length increased (20 to 25 mm) - Lower tobacco wt. New 5 mg tar version introduced. Lower tar achieved by increased filter ventilation and lower tobacco weight. Expanded tobacco level increased (11 to 23%). 10/74

Filter length decreased 84.7 to 84.0 mm. Tar (5 to 4 mg) date changed on pack to comply with FTC Report. 6/78

Cigarette length decreased 84.7 to 84.0 mm. Tar (5 to 4 mg) date changed on pack to comply with FTC Report. 5/82

Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco. 11/83

Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco. 5/84

New package design - silver package with small "True" filter symbol - test marketed in January, 1987 in Minnesota - national in May, 1987. 5/87

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TRUE MENTHOL 85

Introduced - Similar to True filter except for presence of menthol. 9/66

Reconstituted tobacco increased 13 to 17% - RKS decreased 6 to 2%. 9/71

RKS decreased 2 to 0%. 10/71

Fiber shape changed C to Y-shape - No change in deliveries. 11/72

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted. 12/72

Filter length increased 20 to 25 mm - Lower tobacco weight. New 5 mg tar version introduced. Cigarettes are similar to True 85. 1/75

7/76

Lower tar (6.5 to 5.0 mg) and nicotine (0.5 to 0.4 mg) observed correlating with an increase in filter ventilation. Increased filter ventilation resulted from decreasing the number of rows of ventilation holes (from 9 to 5) in the tipping paper and using a more porous combining plug wrap. 2/77

Cigarette length decreased 84.5 to 84.0 mm. 6/78

Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco. 11/83

Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco. 5/84

New package design - silver package with small "True" filter symbol - test marketed in January, 1987 in Minnesota - national in May, 1987. 5/87

TRUE GOLD 85

Introduced nationally in a gold pack - cigarette has cork tipping and delivers 10 mg tar and 0.8 mg nicotine. 11/85

TRUE ULTRA ONE 15

Test marketed - ultra low tar (2 mg) and nicotine (0.2 mg) - 25 mm CA filter with 62% ventilation (6 rows of mechanically perforated). 11/80

Discontinued.

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TRUE 100

Plain - test marketed - 12 mg tar and 0.8 mg nicotine - Blend contains 13% expanded tobacco. 4/74

Cigarette length (99.5 to 97.9 mm) decreased. 6/75

Cigarette length (98.1 to 99.2 mm) increased - Lower tobacco weight and rod density. 6/76

Filter length increased (25 to 27 mm). Tobacco wt. decreased. 7/76

Tar (13 to 8 mg) and nicotine (0.9 to 0.7 mg) decreased resulting from an increase in filter ventilation and a lower tobacco weight. A blend change indicated by a higher filler alkaloid content, lower reducing sugars and a higher expanded tobacco level (9 to 18%). 8/79

Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco. 11/83

Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco. 5/84

New package design - silver package with small "True" filter symbol - test marketed in January, 1987 in Minnesota - national in May, 1987. 5/87

Tipping increased (32 to 34 mm). 7/87

TRUE MENTHOL 100

Menthol - Test marketed - 12 mg tar and 0.8 mg nicotine - Blend contains 13% expanded tobacco. 4/74

Cigarette length (99.4 to 98.3 mm) decreased. 6/75

Cigarette length (98.3 to 99.1 mm) increased - Lower tobacco weight and rod density. 6/76

Filter length increased (25 to 27 mm). Tobacco weight decreased. 7/76

Tar (13 to 9 mg) and nicotine (0.9 to 0.7 mg) decreased resulting from an increase in filter ventilation and a lower tobacco weight. A blend change indicated by a higher filler alkaloid content, lower reducing sugars and a higher expanded tobacco level (9 to 18%). 8/79

Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco. 11/83

Re-engineered version in national distribution - uses laser perforation and lower level of expanded tobacco. 5/84

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TRUE MENTHOL 100 (cont.)

New package design - silver package with small "True" filter symbol - test marketed in Minnesota. 1/87

Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries. 3/87

New package design - national. 5/87

TRUE GOLD 100 (SOFT PACK)

Introduced nationally in a gold pack - cigarette has white tipping and delivers 11 mg tar and 0.9 mg nicotine. 11/85

TRUE GOLD 100 BOX

Introduced nationally in a gold box - cigarette has white tipping and delivers 11 mg tar and 0.9 mg nicotine. 11/85

YORK 80

Introduced - dual filter, carbon on tow filter - Filter has gas phase activity. 3/64

Introduced - dual filter, bonded carbon filter - Filter has gas phase activity. 4/64

Discontinued. 12/67

YORK 90 (NFI)

Introduced - Imperial Size (W-T, 90 mm). 8/61

Dropped from C.I. (History of Brand in C.I. 5/64). 3/64

YORK 100

Introduced - 100 mm cigarette with 20 mm CA filter. 3/67

Discontinued. 12/67

ZACK 80

Introduced - package looks like blue denim - No unusual characteristics. 10/74

Discontinued.

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2031438500

LORILLARD COMPANY

A92

ZACK 15

Introduced - package looks like blue denim - No unusual  
characteristics.

10/74

Discontinued.

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2031438501

E. REYNOLDS TOBACCO COMPANYBRANDON 85 (NP)

Introduced - king size, nonfilter. 2/62  
 Discontinued. 12/65

BRIGHT 85

Test market - Tar (6 mg), nicotine (0.5 mg) and menthol (0.5 mg) - one row mechanical perforation. 7/82  
 National distribution. 11/82  
 Filter length increased (25 to 27 mm) - tobacco weight decreased (0.638 to 0.610 g) - filter RTD increased (4.3 to 4.7 in.). 11/83  
 More porous cigarette paper (24 to 17 sec.) with increased paper component (0.4 to 0.3t) used on brand - Increased filler menthol (3.1 to 3.4 mg) resulted in higher smoke menthol (0.43 to 0.56 mg). 3/84  
 Discontinued. 1/87

BRIGHT 100

Test market - Tar (6 mg), nicotine (0.5 mg) and menthol (0.5 mg) - one row mechanical perforation. 7/82  
 National distribution. 11/82  
 Increased level of paper component (0.4 to 1.4t) - higher filler menthol (4.1 to 4.5 mg) resulted in higher smoke menthol (0.49 to 0.56 mg). 3/84  
 Filter length increased (27 to 31 mm) - tobacco weight decreased (0.780 to 0.736 g). 9/84

BROOKWOOD MENTHOL 85

Test marketed - Tar (9 mg) - Cigarette has a high alkaloid blend with filter ventilation consisting of two rows of mechanically perforated holes. Very similar to the Real Menthol 85 already on the market. 8/79  
 Discontinued.

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2031438502

CAMEL 70 (INTL)

Nicotine delivery and filler alkaloids decreased.	2/62
Nicotine delivery and filler alkaloids increased. Also RTD decreased 0.3 inches of H2O.	2/65
Expanded tobacco (7%) noted in blend of some cigarettes.	12/69
Expanded tobacco observed in all cigarettes - Tobacco weight lower - No change in tar or nicotine.	3/70
Filler alkaloids reduced (0.2t) correlating with a lower nicotine delivery.	11/75
Level of reconstituted tobacco increased from 9 to 16%.	9/78
Tar (24 to 19 mg), nicotine (1.7 to 1.4 mg), and CO (18 to 11 mg) deliveries were noted as a result in a change to a more porous cigarette paper and a change in the type paper component (phosphate to citrate).	11/80
CO delivery increased (12.6 to 15.8 mg) correlating with a change to less porous paper (17 to 25 sec.) - paper component increased (0.4 to 1.4t).	3/83
Tobacco weight (0.798 to 0.772 g) and rod density (0.233 to 0.224 g/cc) decreased.	12/89

CAMEL FILTER 80 (INTL)

Plain - introduced in flip top box similar to Camel Filter 88 - Tar (19 mg) and nicotine (1.3 mg) deliveries.	10/75
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CAMEL FILTER 88

Introduced in three different packages - king size with a 20 mm CA filter.	10/69
Blend change noted in cigarette marketed in brown pack - lower alkaloids resulting in lower nicotine.	4/66
TPM (4 mg) and nicotine (0.2 mg) decreased as result of increase in filter efficiency.	3/67
TPM (2 mg) and nicotine (0.1 mg) decreased as result of change in blend.	4/67
Reconstituted material increased, 19 to 24%.	9/68
Expanded tobacco (9%) noted in blend - no change in tar or nicotine deliveries - Tobacco weight lower.	3/70

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CAMEL FILTER 85 (continued)

The amount of expanded tobacco increased (9 to 12%) - Nicotine delivery decreased (0.1 mg).

3/71

Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased. Lower tar (1 mg) and nicotine (0.1 mg) deliveries observed.

10/72

Filler alkaloids reduced (0.1%).

11/75

Tar (15.8 to 13.8 mg), nicotine (1.19 to 1.02 mg) and CO (17 to 14.4 mg) decreased - achieved filter ventilation (0 to 13%) by band of ESP holes.

4/81

Test marketed packs containing 12 cigarettes per pack.

3/83

Tobacco weight (0.752 to 0.718 g) and rod density (0.241 to 0.229 g/cc) decreased.

7/89

CAMEL FILTER 100

National distribution - delivers 18 mg tar and 1.1 mg nicotine.

7/87

CAMEL MENTHOL 85

Introduced - 85 mm mentholated cigarette with 20 mm CA filter.

9/66

TPM (4 mg) and nicotine (0.2 mg) decreased as result of a blend change.

9/67

Discontinued.

CAMEL LIGHTS 80 (BOX)

Test marketed - Tar (8 mg) and nicotine (0.8 mg) - Similar in characteristics to Camel 85's.

4/80

CO (7.1 to 8.1 mg) increased - change to less porous cigarette paper (16 to 30 sec.) - paper component (0.9 to 1.4%) increased.

8/82

Tobacco weight (0.677 to 0.727 g) and rod density (0.250 to 0.264 g/cc) increased - decreased amount of expanded tobacco (18 to 11%) - decreased total alkaloids observed (1.99 to 1.59%).

9/82

Tar delivery increased (7.8 to 9.1 mg) due to decreased ventilation - Paper component decreased (1.4 to 0.9%). Paper porosity increased (29 to 16 sec.).

5/83

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CAMEL LIGHTS 80 (BOX) (cont.)

Re-engineered - blend contains two different types of reconstituted material - delivers 10 mg tar and 0.7 mg nicotine. 5/86

Tobacco weight (0.674 to 0.652 g) and rod density (0.227 to 0.217 g/cc) decreased. 12/89

CAMEL LIGHTS 85

Introduced on test market - Low delivery cigarettes (10 mg tar and 0.8 mg nicotine) characterized by a 25 mm CA filter with 32% ventilation and a high alkaloid blend. 9/77

Tar (10 to 8 mg) and nicotine (0.9 to 0.8 mg) decreased from an increase in filter ventilation (25 to 35%). 4/80

Test marketed packs containing 12 cigarettes per pack. 3/83

Filter length increased (25 to 27 mm) - rod density increased (0.233 to 0.245 g/cc). 9/83

Less porous cigarette paper (16 to 24 sec.) with higher level of paper component (0.7 to 1.5%). 11/83

A lower level of paper component was observed. 3/88

Tar (9 to 11 mg), nicotine (0.7 to 0.8 mg) and CO (11 to 12 mg) deliveries increased as a result of lower ventilation (24 to 16%). Lower total (134 to 120 mm) and filter (117 to 86 mm) RTD were noted. Tobacco weight (0.689 to 0.642 g) and rod density (0.244 to 0.227 g/cc) decreased. 7/89

CAMEL LIGHTS 100

Introduced - 12 mg tar and 1.2 mg nicotine - Very similar to Winston Lights 100's. 4/79

Tar (11.3 to 9.7 mg), nicotine (0.88 to 0.77 mg) and CO (14.5 to 13.6 mg) deliveries decreased - increased ventilation (20 to 26%) - increased filter length (27 to 31 mm) and weight (0.17 to 0.19 g) - decreased tobacco weight (0.851 to 0.808 g) - tipping paper length increased (34 to 35 mm). 5/84

Filter ventilation increased (16 to 33%) - CO decreased (13.8 to 11.4 mg) - ventilation changed from mechanical to electrostatic perforation - lower total RTD (144 to 117 mm of H2O) was noted. 3/85

Tobacco weight (0.822 to 0.778 g) and rod density (0.243 to 0.230 g/cc) decreased. 7/89

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2031438505

CAMEL TALLS 100

Test marketed - similar to Winston 100 in most characteristics. 9/71  
Removed from market. 4/72

CENTURY 85

National distribution in 33 states - 25 cigarettes per pack - 14 mg tar and 1 mg nicotine. 7/83  
New package graphics. 7/87

CENTURY LIGHTS 85

National distribution in 33 states - 25 cigarettes per pack - 9 mg tar and 0.8 mg nicotine. 7/83  
New package graphics. 7/87  
The tar and CO deliveries decreased as a result of increased ventilation. A shorter tipping paper length (28 to 27 mm) was noted. 5/88

CENTURY 100

National distribution in 33 states - 25 cigarettes per pack - 11 mg tar and 1 mg nicotine. 1/84  
New package graphics. 7/87

CENTURY LIGHTS 100

National distribution in 33 states - 25 cigarettes per pack - 11 mg tar and 1 mg nicotine. 1/84  
New package graphics. 7/87

CENTURY LIGHTS MENTHOL 100

Test marketed - 25 cigarettes per pack - 12 mg tar, 0.7 mg nicotine and 0.5 mg smoke menthol - 225 cigarettes for the price of 200. 11/85

CHELSEA 100 (BOX)

Test marketed in Florida and Pennsylvania - delivers 10 mg tar and 0.7 mg nicotine - ethylvanillin gives the sidestream smoke a sweet smell. 3/89

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CHELSIA 100 MENTHOL (BOX)

Test marketed in Florida and Pennsylvania - delivers 10 mg tar, 0.7 mg nicotine and 0.7 mg smoke menthol - ethylvanillin gives the sidestream smoke a sweet smell.

3/83

DAWN 120

Introduced 120 mm cigarette - white cigarette paper with thin gray parallel lines (filigrain) - Tar (20 mg) and nicotine (1.5 mg) deliveries. 21 mm circumference.

5/75

Discontinued.

12/76

DAWN MENTHOL 120

Introduced 120 mm menthol cigarette - white cigarette paper with thin gray parallel lines (filigrain) - tar (20 mg) and nicotine (1.5 mg) deliveries. 21 mm circumference.

5/75

Discontinued.

12/76

DORAL 85

Plain (85 mm) model introduced - 25 mm filter, 10 mm CA, and 15 mm plastic sections and utilizes filter ventilation.

11/68

Expanded tobacco (64) noted in blend since Sept., 1969.

11/69

Reconstituted tobacco in blend increased (20 to 23%) in Doral 85 Plain. Tar delivery increased (1 mg) - filter ventilation decreased (30 to 24%).

4/71

Tar delivery increased (1 mg) - Filter ventilation decreased (24 to 21%).

8/71

Tar delivery decreased by a change to a more porous cigarette paper and a lower filler alkaloid content - Tar (2 mg) and nicotine (0.1 mg) decreased.

9/75

Tar (1 mg) and nicotine (0.1 mg) increased as result of increase in filler rod TPM.

11/76

Discontinued.

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2031438507

DORAL MENTHOL 85

Mentholated (85 mm) model introduced - 25 mm filter, 10 mm CA, and 15 mm plastic sections and utilizes filter ventilation. 11/68

A green plug wrap was placed between the plastic mouthpiece and outer plug wrap on Doral Menthol. 6/69

Expanded tobacco (6%) noted in blend since September, 1969. 11/69

The amount of expanded tobacco increased (6 to 8%) and the amount of filter ventilation increased. The tar decreased (1 mg). 2/71

Tar delivery increased (1 mg) - Filter ventilation decreased (30 to 24%). 4/71

Tar delivery increased (1 mg) - Filter ventilation decreased (24 to 21%). 8/71

Tar delivery decreased by a change to a more porous cigarette paper and a lower filler alkaloid content - Tar (2 mg) and nicotine (0.1 mg) decreased. 9/75

Higher tar (12.3 to 13.7 mg) and nicotine (0.9 to 1.0 mg) were noted corresponding to a decrease in filter ventilation. 3/77

Discontinued.

DORAL II 85

Test marketed - These new Doral II cigarettes deliver 5 mg tar and 0.5 mg nicotine - 25 mm CA filter with 60% ventilation and a high level of paper component in the cigarette paper - 19% Freon expanded tobacco in the blend. 2/79

Discontinued.

DORAL II MENTHOL 85

Test marketed - These new Doral II Menthol cigarettes deliver 5 mg tar and 0.5 mg nicotine - 25 mm CA filter with 60% ventilation and a high level of citrate in the cigarette paper - 19% Freon expanded tobacco in the blend. 2/79

Tar (5.3 to 3.8 mg), nicotine (0.48 to 0.41 mg) and CO (4.2 to 3.2 mg) lowered - increase in filter ventilation (53 to 65% lower total RTD (3.6 to 2.8)). 2/81

Paper component in cigarette paper decreased - higher puff count (7.2 to 7.5). 4/81

Discontinued.

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DORAL FILTER LIGHTS 85

Value entry product - test marketed in 13 states - delivers 12 mg tar - contains highest level of reconstituted material (32%).

5/84

National distribution.

New package graphics.

7/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation was added (28%) which resulted in lower tar and CO deliveries and total RTD.

5/88

DORAL FILTER LIGHTS MENTHOL 85

Value entry product - test marketed in 13 states - delivers 12 mg tar - contains highest level of reconstituted material (32%).

5/84

National distribution.

New package graphics.

7/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation was added (32%) which resulted in lower tar and CO deliveries and total RTD.

5/88

The level of expanded tobacco decreased (25 to 19%) resulting in a higher tobacco weight (0.557 to 0.606 g) and rod density (0.203 to 0.213 g/cc).

12/89

DORAL FILTER LIGHTS 100

Value entry product - test marketed in 13 states - first 100 mm cigarette introduced using Doral name.

5/84

National distribution.

New package graphics.

7/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation increased resulting in lower tar and CO deliveries and total RTD.

5/88

Tar (10 to 11 mg), nicotine (0.8 to 0.9 mg) and CO (9 to 10 mg) deliveries increased as a result of lower ventilation (41 to 34%).

11/89

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DORAL FILTER LIGHTS MENTHOL 100

Value entry product - test marketed in 13 states - first 100 mm cigarette introduced using Doral name. 5/84

National distribution. 7/87

New package graphics. 7/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation increased resulting in lower tar and CO deliveries and total RTD. 5/88

Ventilation decreased (40 to 32%) - resulted in higher total RTD (91 to 125 mm of H<sub>2</sub>O), filter RTD (83 to 118 mm of H<sub>2</sub>O) and CO delivery (11 to 13 mg). Lower nicotine delivery (0.8 to 0.7 mg) correlated with lower alkaloids (2.2 to 1.9%). 5/89

The level of expanded tobacco decreased (25 to 19%) resulting in a higher tobacco weight (0.696 to 0.738 g) and rod density (0.204 to 0.218 g/cc). 12/89

DORAL FULL FLAVOR 80 (BOX)

Test market - Louisiana - delivers 14 mg tar and 0.8 mg nicotine. 7/87

DORAL FULL FLAVOR 85

Test marketed in New Hampshire - delivers 17 mg tar and 1 mg nicotine - uses phosphate as paper component. 1/87

National distribution. 3/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Ventilation (7%) was added. 5/88

DORAL FULL FLAVOR 100

Test marketed in New Hampshire - delivers 14 mg tar and 0.9 mg nicotine. 1/87

Nationally distributed. 3/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. 5/88

Tipping paper length decreased (36 to 35 mm). 5/89

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DORAL FULL FLAVOR MENTHOL 85

Distributed nationally - delivers 16 mg tar, 1.1 mg nicotine and 0.5 mg smoke menthol.

3/89

DORAL FULL FLAVOR MENTHOL 100

Distributed nationally - delivers 15 mg tar, 1.1 mg nicotine and 0.6 mg smoke menthol.

3/89

DORAL ULTRA LIGHTS 85

Introduced nationally - this value entry product delivers 9 mg tar and 0.4 mg nicotine.

5/89

DORAL ULTRA LIGHTS 100

Distributed nationally - delivers 7 mg tar and 0.4 mg nicotine - uses phosphate as the paper component.

3/87

Levels of reconstituted tobacco (39 to 22%) and expanded tobacco (32 to 25%) decreased resulting in higher alkaloid content and nicotine delivery. Increased ventilation resulted in lower tar and CO deliveries and lower total RTD.

5/88

EMBRA 100

100 mm slim cigarettes with 27 mm filter, plain - new type pack and carton.

9/69

Expanded tobacco (6%) noted in blend since August, 1969.

11/69

Tar (4 mg) and nicotine (0.2 mg) increased by changes in paper porosity (11 to 18 sec.) and fiber denier.

2/70

Discontinued by Reynolds in May, 1970.

5/70

EMBRA MENTHOL 100

100 mm slim cigarettes with 27 mm filter, mentholated - new type pack and carton.

9/69

Expanded tobacco (6%) noted in blend since August, 1969.

11/69

Tar (4 mg) and nicotine (0.2 mg) increased by changes in paper porosity (11 to 18 sec.) and fiber denier.

2/70

Discontinued by Reynolds in May, 1970.

5/70

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JANESTOWN 85

25 mm cigarette - similar to Winston 85 possibly for trademark purposes.

6/70

Discontinued.

MAGNA 80 (BOX)

Distributed in ten cities - generic price - delivers 12 mg tar and 0.8 mg nicotine.

3/87

MAGNA LIGHTS 80 (BOX)

Introduced nationally - this value entry product delivers 9 mg tar and 0.6 mg nicotine.

5/89

MAGNA 85

Distributed in ten cities - generic price - delivers 12 mg tar and 0.8 mg nicotine.

3/87

MAGNA LITES 85

Distributed in ten cities - generic price - delivers 9 mg tar and 0.6 mg nicotine.

3/87

Lower ventilation (22 to 17%) and a change in cigarette paper resulted in higher tar (10 to 11 mg) and nicotine (0.7 to 0.8 mg) deliveries. The cigarette paper is more porous and has a lower level of paper component. A lower total and filter RTD were noted.

11/89

MORE 120 (BOX)

Plain - Introduced - 120 mm cigarette with brown colored cigarette and tipping paper. This new cigarette is slimmer (21 mm circumference) and longer (119 mm) than any other cigarette on the market. Two versions introduced - 1 with 3 rows of parallel (mechanically) ventilation holes the length of the cigarette rod and 1 without ventilation holes.

9/74

Tar decrease (22 to 21 mg) by increase in filter ventilation (22 to 36%). A lower total RTD was observed.

9/79

Tar (20.5 to 18.5 mg), nicotine (1.64 to 1.52 mg) and CO (23.2 to 20.4 mg) reduced - lower filler rod TPM (38.1 to 35.1 mg).

1/81

Tar (17.3 to 15.8 mg), nicotine (1.46 to 1.23 mg) and CO (20.4 to 19.3 mg) lowered - increase in filter length (30 to 35 mm) and tipping paper length (35 to 39 mm).

5/81

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MORE 120 (BOX)

Tar (15 to 17.1 mg), nicotine (1.19 to 1.36 mg) and CO (21 to 22.8 mg) increased - decreased ventilation (37 to 28%). 11/82

Tobacco weight (0.771 to 0.735 g) and rod density (0.255 to 0.245 g/cc) decreased. 7/89

MORE MENTHOL 120 (BOX)

Menthol - Introduced - 120 mm cigarette with brown colored cigarette and tipping paper. This new cigarette is slimmer (21 mm circumference) and longer (119 mm) than any other cigarette on the market. Two versions introduced - one with 3 rows of parallel (mechanically) ventilation holes the length of the cigarette rod and one without ventilation holes. 9/74

Tar decrease (23 to 22 mg) by increase in filter ventilation (23 to 33%). A lower total RTD was observed. 9/79

Tar (21.2 to 18.8 mg), nicotine (1.75 to 1.53 mg) and CO (23.4 to 19.4 mg) reduced - lower filler rod TPM (38.1 to 35.1 mg). 1/81

Tar (18 to 16 mg), nicotine (1.5 to 1.3 mg) and CO (20 to 19 mg) lowered - increase filter length (30 to 35 mm) and tipping paper length (35 to 39 mm). 6/81

Tobacco weight (0.780 to 0.721 g) and rod density (0.259 to 0.239 g/cc) decreased. 7/89

MORE LIGHTS 100 (BOX)

Introduced - a beige colored slim cigarette - targeted for the female market - tar (8 mg) and nicotine (0.6 mg) - expanded tobacco (16%). 6/81

Color of cigarette paper changed to deep tan - design of package changed. 9/84

Tobacco weight (0.678 to 0.639 g) and rod density (0.246 to 0.232 g/cc) decreased. 7/89

MORE LIGHTS MENTHOL 100 (BOX)

Introduced - a beige colored slim cigarette - targeted for the female market - tar (8 mg) and nicotine (0.6 mg) - expanded tobacco (28%). 6/81

Filler menthol increased (2.6 to 3.4 mg) - smoke menthol increased (0.39 to 0.36 mm) - ventilation system changed from mechanical to Mauni laser perforation. 5/84

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MORE LIGHTS MENTHOL 100 (BOX) (r. rt.)

Color of cigarette paper changed to deep tan - design of package changed. Decrease in expanded tobacco (28 to 17%) - increase in tobacco weight (0.603 to 0.684 g) - increase puff count (8.0 to 9.5).

9/84

Tobacco weight (0.678 to 0.638 g) and rod density (0.247 to 0.232 g/cc) decreased.

12/89

MORE LIGHTS 120

Test market - San Francisco and Los Angeles - delivers 12 mg tar and 0.9 mg nicotine - similar to More 120's.

7/87

MORE LIGHTS 120 MENTHOL

Test market - San Francisco and Los Angeles - delivers 12 mg tar, 0.9 mg nicotine and 0.5 mg smoke menthol - similar to More 120's.

7/87

MORE WHITE LIGHTS 120

Test marketed on East Coast - delivers 9 mg tar and 0.7 mg nicotine - uses white cigarette paper.

1/89

MORE WHITE LIGHTS MENTHOL 120

Test marketed on East Coast - delivers 11 mg tar, 0.7 mg nicotine and 0.5 mg smoke menthol - uses white cigarette paper.

1/89

MR. MENTHOL 15

85 mm mentholated cigarette with 20 mm CA filter. Single row of ventilation holes - Blend does not contain expanded tobacco.

2/70

Discontinued.

NOW 80 (BOX)

Introduced a low tar (0.2 mg) and nicotine (0.03 mg) cigarette. Ultra low delivery achieved by high filter ventilation (85%) and low tobacco weight (62% expanded tobacco).

4/80

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2031438514

NOW 85 (BOX)

Plain - test marketed in a flip-top box - Tar (2 mg) and nicotine (0.2 mg) deliveries - Accomplished primarily by high ventilation and blend composition - Blend contains 50% expanded tobacco and lowest filler weight of any 85 mm cigarette.

12/75

Test marketed in a crush-proof box - Tar (2 mg) and nicotine (0.2 mg) deliveries accomplished by high filter ventilation and blend composition - Blend contains 50% expanded tobacco and has a rod density of 0.17 g/cc.

1/76

Tar and nicotine data on pack changed to 1 mg and 0.1 mg, respectively. Lower tar achieved as result of increased filter ventilation.

12/76

Tar (1 mg) and nicotine (0.1 mg) data listed on pack replaced by statement "Ultra Low Tar." Increase in filler alkaloids noted.

11/77

Tar (2 to 0.6 mg), nicotine (0.2 to 0.06 mg) and CC (2 to <1.0 mg) lowered - increase filter ventilation (68 to 82%) and tipping paper (30 to 35 mm) - tar data on pack changed from 2 to 1 mg.

6/81

Filter length increased (25 to 27 mm) - filter RTD increased (6.1 to 6.5 in. H2O) - tobacco weight (0.524 to 0.505 g) and rod density (0.182 to 0.718 decreased. Ventilation system changed from mechanical to laser perforation.

3/83

Tipping paper length decreased (35 to 31 mm).

1/84

Discontinued - replaced by Now 85 (SP).

11/77

NOW 85 (SOFT PACK)

Soft pack version marketed in Washington, D.C. Similar to hard box version of Now 85 cigarettes with the exception of a longer cigarette length. "Ultra Low Tar" specified on the package.

11/77

Tobacco weight (0.514 to 0.471 g) and rod density (0.181 to 0.167 g/cc) decreased.

7/89

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NOW MENTHOL 85 (BOX)

Menthol - test marketed in a flip top box - Tar (2 mg) and nicotine (0.2 mg) deliveries - Accomplished primarily by high ventilation and blend composition - Blend contains 50% expanded tobacco and lowest filler weight of any 85 mm cigt.

12/75

Menthol - Test marketed in a crush-proof box - Tar (2 mg) and nicotine (0.2 mg) deliveries accomplished by a high filter ventilation and blend composition - Blend contains 50% expanded tobacco and has a rod density of 0.17 g/cc.

1/76

Tar and nicotine data on pack changed to 1 mg and 0.1 mg, respectively. Lower tar achieved as result of increased filter ventilation.

12/76

Tar (1 mg) and nicotine (0.1 mg) data listed on pack changed to 2 mg and 0.2 mg, respectively. Increase in filler alkaloids noted.

11/77

Tar (2 to 0.06 mg), nicotine (0.2 to 0.06 mg) and CO (2 to <1.0 mg) lowered - increase filter ventilation (68 to 82%) and tipping paper (30 to 35 mm) - tar data on pack changed from 2 to 1 mg.

6/81

Filter length increased (25 to 27 mm) - decreased tobacco weight (0.517 to 0.492 g). Ventilation system changed from mechanical perforation to laser perforation.

11/83

Tipping paper length decreased (35 to 31 mm).

1/84

Discontinued - replaced by Now Menthol 85 (SP).

11/77

NOW MENTHOL 85 (SOFT PACK)

Soft pack version marketed in Washington, D.C. Similar to hard box version of Now Menthol 85 cigarettes with the exception of a longer cigarette length. "Ultra Low Tar" specified on the package.

11/77

Tobacco weight (0.487 to 0.468 g) and rod density (0.173 to 0.165 g/cc) decreased.

12/89

NOW 100

Test marketed - Tar (2 mg) and nicotine (0.2 mg) - Low delivery achieved by 75% filter ventilation.

3/80

Expanded tobacco (25 to 50%) increased - reconstituted tobacco (22 to 15%) decreased - lower tobacco weight (0.805 to 0.664 g) and rod density (0.229 to 0.185 g/cc).

2/81

Ventilation system changed from three to two rows laser perforation.

5/83

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NOW 100 (cont.)

Lower puff count due to less porous paper (14 to 23 sec.) with high level of paper component (0.5 to 1.6%). Increased filter RTD (3.7 to 4.7 in. H2O) and filter efficiency (58 to 65%) due to change in fiber denier (3.5/Y to 2.6/Y).

11/83

Tar (2.8 to 3.6 mg), nicotine (0.28 to 0.34 mg) and CO (2.9 to 4.3 mg) increased - decrease in ventilation (74 to 66%) - filter length (27 to 31 mm), filter weight (0.18 to 0.20 g), increased - tobacco weight decreased (0.659 to 0.614 g).

5/84

Tar, nicotine and CO decreased as a result of higher ventilation.

11/87

Tobacco weight (0.621 to 0.576 g) and rod density (0.185 to 0.170 g/cc) decreased.

7/89

NOW 100 (BOX)

Introduced - slim cigarette (22.5 mm), tar (0.00 mg), filter ventilation (95%), and filter RTD (9.5) - blend 100% expanded tobacco.

3/81

NOW MENTHOL 100

Test marketed - Tar (2 mg) and nicotine (0.2 mg) - Low delivery achieved by 75% filter ventilation.

3/80

Expanded tobacco (25 to 50%) increased - reconstituted tobacco (22 to 15%) decreased - lower tobacco weight (0.796 to 0.656 g) and rod density (0.229 to 0.185 g/cc).

2/81

Tar (2.8 to 1.4 mg) and nicotine (0.25 to 0.20 mg) decreased - ventilation (76 to 82%) increased - menthol (0.34 to 0.29 mg) decreased.

5/82

Tar (1.5 to 2.3 mg), nicotine (0.21 to 0.30 mg) and CO (0.9 to 1.8 mg) increased - decreased ventilation (82 to 76%).

9/82

Ventilation system changed from three to two rows laser perforation.

5/83

CO increased (1.6 to 2.5 mg) due to a change to a less porous paper (15 to 25 sec.) with higher level of paper component (0.4 to 1.9%) - Fiber denier decreased (3.2/Y to 2.4/Y) resulting in increased filter RTD (3.8 to 4.6 in. H2O) and filter efficiency (54 to 64%).

1/84

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NOM MENTHOL 100 (cont.)

Tar (2.5 to 3.4 mg) and CO (2.9 to 3.6 mg) deliveries increased - decreased ventilation (77 to 71%). Filter length increased (27 to 31 mm) - decreased tobacco weight (0.662 to 0.620 g), increased total RTD (3.4 to 4.1 in. H2O) filter RTD (4.6 to 5.4 in. H2O) and filter weight (0.19 to 0.21 g).

5/84

Tobacco weight (0.584 to 0.572 g) and rod density (0.173 to 0.168 g/cc) decreased.

12/89

PRINCE ALBERT 85

Introduced - king size with a 20 mm CA filter - "pipe tobacco" blend.

8/65

Discontinued.

REAL 85

Introduced - low tar (10 mg) and nicotine (0.8 mg) correlating with a 25 mm high efficiency CA filter with ventilation (27%). Blend contains similar levels of reconstituted material and Freon expanded tobacco typical of other Reynolds' products. Tar (9 mg) listed on pack along with a claim "Nothing Artificial Added."

6/77

Lower tar (10 to 8 mg) and nicotine (0.9 to 0.7 mg) resulting from an increase in filter ventilation (25 to 38%).

5/80

Discontinued.

REAL MENTHOL 85

Introduced - low tar (10 mg) and nicotine (0.8 mg) correlating with a 25 mm high efficiency CA filter with ventilation (34%). Blend contains similar levels of reconstituted material and Freon expanded tobacco typical of other Reynolds' products. Tar (9 mg) listed on pack along with a claim "Nothing Artificial Added."

6/77

Filler and smoke menthol levels increased.

2/79

Discontinued.

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RITZ 100 (BOX)

Introduced - flip-top box has Yves Saint Laurent designer logo - cigarettes will be sold at a premium price - delivers 11 mg tar and 0.8 mg nicotine - typical Reynolds blend. 1/85

National distribution. 4/86

Tobacco weight (0.758 to 0.694 g) and rod density (0.244 to 0.222 g/cc) decreased. 12/89

RITZ MENTHOL 100 (BOX)

Introduced - flip-top box has Yves Saint Laurent designer logo - cigarettes will be sold at a premium price - delivers 11 mg tar, 0.8 mg nicotine and 0.7 mg menthol. 1/85

National distribution. 4/86

Tobacco weight (0.772 to 0.734 g) and rod density (0.248 to 0.234 g/cc) decreased. 12/89

SALEM 80 (BOX)

Introduced in flip-top box - Similar to Salem 85. 3/74

Lower filler alkaloids (0.18) correlating with a lower nicotine delivery. 11/75

Tipping paper length increased (23 to 24 mm). Decrease in tar delivery and puff count noted. 11/76

Decrease in tar (19 to 15 mg) and nicotine (1.2 to 1.1 mg) deliveries corresponding to the use of a more porous cigarette paper and a more efficient filter. 7/77

Reintroduced in test market - uses cork tipping paper - delivers 16 mg tar, 1.1 mg nicotine, and 0.5 mg smoke menthol. 9/85

Discontinued. 8/86

SALEM 85

Nicotine delivery and filler alkaloids decreased. 10/60

Nicotine delivery and filler alkaloids decreased. 7/63

Nicotine delivery and filler alkaloids increased. 7/64

Nicotine delivery and filler alkaloids increased. 2/65

TPM decreased 1.5 mg by changing paper additive. 3/65

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SALEM 85 (cont.)

Filter length increased, 17 to 20 mm.	10/66
Expanded tobacco (4%) noted in blend of some cigarettes.	11/69
Tar (1 mg) and tobacco weight decreased by addition of expanded tobacco.	3/70
Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased - No change in smoke deliveries.	2/73
Tar delivery (1 mg) decreased - Cigarette length decreased - puff count lower.	3/73
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (84.3 to 84.0 mm) decreased.	2/76
Decrease in tar (18 to 16 mg) and nicotine (1.2 to 1.0 mg) correlating with a change to a more porous cigarette paper.	5/77
Tar (13.7 to 15.2 mg), nicotine (1.04 to 1.19 mg) and CO (13.6 to 15.4 mg) increased - change to a less porous paper (18 to 20 sec.) and a less efficient filter (45 to 40%) - higher filler menthol (1.4 to 2.1 mg) resulted in higher menthol in smoke (0.42 to 0.55 mg). Tobacco wt. (0.783 to 0.745 g) and rod density (0.252 to 0.242 g/cc) decreased - increased paper component (0.6 to 1.3%).	8/82
Test marketed pack containing 12 cigarettes per pack.	3/83
Ventilation decreased (18% to none) resulting in higher tar (15 to 16 mg), nicotine (1.2 to 1.3 mg), CO (16 to 18 mg), and menthol (0.57 to 0.68 mg) deliveries.	5/83
Paper component level increased (0.6 to 1.5%).	11/83
New package graphics test marketed.	11/87
Tobacco weight (0.737 to 0.700 g) and rod density (0.235 to 0.224 g/cc) decreased.	7/89

SALEM EXTRA 85

Introduced - Delivers more menthol than current Salem 85 - cork tipping.	10/74
Discontinued.	

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SALEM LIGHTS 85

Menthol - Test marketed - Tar (12 mg) and nicotine (0.8 mg) deliveries - Lower in tar than Salem 85 because of more porous cigarette paper, filter ventilation and an increased filter and tipping paper length. 11/75

Tar delivery (1 mg) decreased by increase in filter ventilation. 4/76

Tar (10 to 8 mg), nicotine (0.8 to 0.6 mg), and CO (13 to 12 mg) decreased resulting from an increase in both filter ventilation (16 to 28t) and tipping paper length (30 to 32 mm). 10/80

Tar (8.6 to 8.2 mg) and CO (10.7 to 8.8 mg) decreased - increased filter ventilation (30 to 42t). Paper porosity decreased (17 to 26 sec.) - paper component increased (0.7 to 1.6t). Tobacco weight (0.714 to 0.689 g) decreased - increased amount of expanded tobacco. (13 to 17%). 10/82

Test marketed pack containing 12 cigarettes per pack. 3/83

Tar (8 to 9 mg), nicotine (0.7 to 0.8 mg), CO (9 to 11 mg), and menthol (0.31 to 0.50 mg) deliveries increased due to decreased ventilation. Ventilation system changed from two to one row of mechanical perforation - decreased paper component - increased cigarette paper porosity. 5/83

Filter length increased (25 to 27 mm), rod density increased (0.237 to 0.244 g/cc). 9/83

Tar (9 to 10 mg), nicotine (0.77 to 0.82 mg) and puff count (7.4 to 7.8) increased - tipping paper length decreased (32 to 31 mm) - filler menthol (2.6 to 2.9 mg) and smoke menthol (0.48 to 0.52 mg) increased. 3/84

New package graphics teste marketed. 11/87

Tobacco weight (0.664 to 0.636 g) and rod density (0.234 to 0.224 g/cc) decreased. 7/89

SALEM ULTRA LIGHTS 85

Name changed to Salem Ultra Lights. 3/82

Tar (4.8 to 5.5 mg), nicotine (0.42 to 0.47 mg) and CO (4.7 to 6.7 mg) increased - decreased ventilation (36 to 52t) and less porous paper (18 to 26 sec.) - increased paper component (0.8 to 1.7t). Filter efficiency (58 to 63t) increased - increased filter RTD (99 to 130 mm of H2O) - Menthol in smoke (0.50 to 0.42 mg) decreased - lower menthol in filler and filter. 12/82

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SALEM ULTRA LIGHTS 85 (cont.)

Filter (25 to 27 mm) and tipping paper (30 to 31 mm) lengths increased. Ventilation system changed from mechanical to Hauni laser. 11/83

New package graphics test marketed. 11/87

SALEM 100

Test marketed - 100 mm long - 20 mm CA filter. 6/67

Tar (4 mg) and nicotine (0.2 mg) reduced by filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 12/67

Tar (2 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (6%) - Tobacco weight lower. 10/70

Reconstituted tobacco content of blend increased (22 to 26%). 4/71

Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased - No change in smoke deliveries. 1/73

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Name changed from Salem Premium Length 100 to Salem 100. 5/77

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Tar (15.3 to 13.9 mg) and CO (16.4 to 13.8 mg) decreased - increase in filter ventilation (17 to 28%). 1/81

Tar (14.6 to 17.0 mg), nicotine (1.17 to 1.27 mg) and CO (14.3 to 16.7 mg) increased - change to less porous paper (16 to 24 sec.) and decreased ventilation (23 to 19%). Menthol in smoke (0.43 to 0.69 mg) increased - higher menthol levels in filler and filter. 10/82

Test marketed pack with 12 cigarettes per pack. 3/83

CO decreased (16 to 14 mg) - change to more porous paper (25 to 17 sec.) with lower level of paper component (1.5 to 0.7%). 5/84

Change to a less porous cigarette paper (14 to 20 sec.) and increased level of paper component (0.8 to 1.6%) - longer tipping paper (31 to 32 mm). 11/85

New package graphics test marketed. 11/87

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SALEM 100 (cont.)

Increased tar delivery correlated with lower level of paper component. 1/88

Tobacco weight (0.859 to 0.829 g) and rod density (0.241 to 0.232 g/cc) decreased. 7/89

SALEM LIGHTS 100

Introduced - appears to be low delivery (11 mg tar and 0.8 mg nicotine) version of Salem 100 cigarettes. Low delivery achieved by filter ventilation. 10/76

Name changed from Salem Long Lights 100 to Salem Light 100. 5/77

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Tar (10.3 to 9.8 mg) reduced - lower filter ventilation (33 to 29%) - increase in tipping paper length (31 to 35 mm). 2/81

Filter length increased (27 to 31 mm) - tobacco weight decreased (0.852 to 0.811 g). 6/84

Filter length increased (27 to 31 mm), tobacco weight decreased (0.847 to 0.803 g), smoke menthol lower (0.53 to 0.45 mg) correlated with lower filler menthol content (3.6 to 2.9 mg). 7/84

New package graphics test marketed. 11/87

Tobacco weight (0.774 to 0.750 g) and rod density (0.230 to 0.223 g/cc) decreased. 7/89

SALEM LIGHTS 100 "CUSTOM CASE"

Test marketed in an eight sided package in Richmond, Fort Wayne, Milwaukee and Houston. Higher smoke deliveries on this new brand - a result of lower ventilation and a less efficient filter - smaller circumference, lower tobacco weight and shorter cigarette length were also noted. 3/87

SALEM SLIM LIGHTS 100 (BOX)

Introduced - nationally - delivers 7.6 mg tar and 0.61 mg nicotine. The cigarette circumference is 22.7 mm. 12/81

Tar data changed on pack (9 to 8 mg) to comply with FTC Report. 6/82

New package graphics test marketed. 11/87

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SALEM ULTRA 100

Name change to Salem Ultra Lights 100.

3/82

SALEM ULTRA LIGHTS 100

Tar (4.6 to 6.0 mg), nicotine (0.46 to 0.54 mg) and CO (6.0 to 7.9 mg) increased - change to a less porous paper (17 to 24 sec.) - increased paper component (0.8 to 1.5%). Tobacco weight (0.829 to 0.840 g) and rod density (0.236 to 0.241 g/cc) increased - decreased amount of expanded tobacco (28 to 16%) - Menthol in smoke (0.37 to 0.47 mg) increased - total and filter RTD increased.

12/82

Tar (5.3 to 6.1 mg) and CO (6.2 to 7.2 mg) increased - decreased ventilation (60 to 56%). Increased filter length (27 to 31 mm) and filter weight (0.20 to 0.22 g) - decreased tobacco weight (0.831 to 0.789 g). Ventilation system changed from mechanical to Mauni laser.

5/84

New package graphics test marketed.

11/87

Tobacco weight (0.789 to 0.769 g) and rod density (0.234 to 0.228 g/cc) decreased.

12/89

STERLING SPECIAL BLEND 85 (SOFT PACK)

Introduced in black soft pack - similar in design to Sterling Special Blend (Box) - delivers 9 mg tar and 0.6 mg nicotine.

5/85

Discontinued.

1/87

STERLING SPECIAL BLEND 94 (BOX)

National distribution - delivers 12 mg tar and 0.9 mg nicotine - packed in black pack - 94 mm cigarette length.

1/84

Discontinued.

1/87

STERLING SPECIAL BLEND MENTHOL 94 (BOX)

National distribution - delivers 12 mg tar and 0.9 mg nicotine - packed in black pack - 94 mm cigarette length.

1/84

Discontinued.

1/87

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TEMPO 85

Test marketed - dual carbon filter king size soft pack - fused carbon inner plug - high gas phase activity. 4/64

Polyethylene pellets added to charcoal filter - decrease in gas phase activity - blend change indicated by an increase in filler alkaloids and decrease in reducing sugars. 1/65

Nicotine delivery and filler alkaloids increased. 4/65

Gas phase activity of filter decreased. 2/66

TPM (5 mg) and nicotine (0.5 mg) decreased as result of changes in blend, cigarette paper, and filter. 12/66

Reconstituted tobacco content increased (17 to 23%). 3/67

Tar (4 mg) and nicotine (0.2 mg) reduced by change in filter length (20 to 25 mm) and in tipping paper (24 to 30 mm). 5/68

Tar (2 mg) reduced as a result of introduction of Hauni-type ventilation (27%) - A higher gas phase smoke index and lower total and filter RTD were noted. 10/68

Tar (2 mg) and nicotine (0.1 mg) increased by reduction in the amount of filter ventilation. 7/69

Tar (1 mg) and nicotine (0.1 mg) reduced by an increase in filter ventilation - Reduction in total and filter RTD was noted. 7/70

Package overwrap changed from cellophane to polypropylene. 8/70

Expanded tobacco observed in blend (3t) - Paper porosity changed (12 to 8 seconds) - Tar increased (1 mg). 10/71

Expanded tobacco increased (4 to 8t). Lower tobacco weight and rod density noted - Cigarette paper porosity changed (17 to 12 seconds). 3/72

Tar (5 mg) and nicotine (0.3 mg) reduced by increased filter efficiency and filter ventilation - Fiber denier of outer filter changed from 3.2 to 1.9 - Expanded tobacco increased from 7 to 11t. 2/76

Discontinued. 2/76

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VANTAGE 85

A new low tar (11 mg) and nicotine (0.9 mg) cigarette with a new 25 mm geometrically shaped cellulose acetate filter - High alkaloids content and blend contains 8% expanded tobacco - Tar (11 mg) and nicotine (0.9 mg) listed on pack.

7/70

Filter shape of cigarettes modified and is similar to that of Vantage 100. A 25% reduction in filter weight resulted from this change in filter shape.

3/79

Incorporation of filter ventilation (19%) resulted in lower tar (10 to 9 mg) and nicotine (0.9 to 0.8 mg) deliveries.

5/79

Tar (9 to 10 mg) increased resulting from the elimination of filter ventilation. Vantage 85 cigarettes manufactured during April, May and June, 1979, had filter ventilation.

8/79

Incorporation of filter ventilation (16%) resulted in lower tar (10 to 9 mg).

3/80

Test marketed pack containing 12 cigarettes per pack.

3/83

Test marketed new package design in Washington State and Oklahoma. The "bulls-eye" was replaced by a band of red, gold and blue stripes.

3/86

New package design in national distribution.

11/86

Tar, nicotine and CO deliveries increased as a result of lower ventilation.

9/87

Ventilation increased (10 to 28%) resulting in lower tar (10 to 8 mg) and CO (13 to 12 mg) deliveries and a lower total RTD (146 to 136 mm of H<sub>2</sub>O). Lower nicotine delivery (0.7 to 0.6 mg) correlated with lower total alkaloids (2.0 to 1.8%). - type of perforation changed from ESP to Mauni Laser.

5/89

Increased level of expanded tobacco (16 to 20%) resulted in a lower tobacco weight (0.677 to 0.657 g) and rod density (0.238 to 0.224 g/cc).

7/89

VANTAGE MENTHOL 85

Similar to the Vantage plain except for menthol.

4/71

Filter design changed to circular openings at each end and constricted in the middle.

10/73

Menthol in smoke delivery decreased resulting from lower filler menthol content.

7/74

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VANTAGE MENTHOL 85 (cont.)

Tar (9.8 to 8.6 mg), nicotine (0.77 to 0.69 mg) and CO (15.2 to 12.6 mg) lowered - introduction of filter ventilation (14%) with one row of MP holes. Tar data listed on pack changed (11 mg to 9 mg). 2/81

Tar (9.4 to 7.9 mg) and CO (12.2 to 8.8 mg) deliveries decreased resulting from increased ventilation (16 to 40%) fiber denier and shape (1.8/R to 3.3/Y) changed - correlated with lower filtration efficiency (63 to 54%) - a less porous cigarette paper (16 to 20 sec.) with increased paper component (0.9 to 1.4%) was noted. 1/85

Package with multicolored stripes replaces "bull's-eye" package. 11/86

Filter changed to a tow-in-tow filter - higher smoke deliveries correlated with this change - higher smoke menthol delivery correlated with increased filter menthol. 1/87

Tobacco weight (0.714 to 0.684 g) and rod density (0.244 to 0.232 g/cc) decreased. 12/89

VANTAGE 100

Low tar (11 mg) and nicotine (0.8 mg) cigarette characterized by a high efficiency filter containing 18% ventilation. A modified version of the Filtrona filter used on Vantage 85 cigarettes. Tar (11 mg) and nicotine (0.9 mg) listed on pack. 1/77

Name changed from Vantage Long 100 to Vantage 100. 4/77

Cigarette length increased corresponding to 0.4 mm increase in filter. 11/77

Tar (10.0 to 7.5 mg), nicotine (0.80 to 0.67 mg) and CO (15.1 to 11.9 mg) lowered - increase in filter ventilation (18 to 30%). Tar data listed on pack changed (12 to 9 mg). 2/81

Increase in tar (7.6 to 9.0 mg) and CO (11.7 to 13.0 mg) as result of a change in paper porosity (13 to 17 sec.). 8/81

Total and filter RTD increased and filter efficiency decreased due to change in fiber denier and shape (1.7/R to 2.6/Y). 5/83

Test marketed new package design in Washington State and Oklahoma. The "bulls-eye" was replaced by red, blue and gold bands. 3/86

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VANTAGE 100 (cont.)

New package design in national distribution.

11/86

Tobacco weight (0.825 to 0.781 g) and rod density (0.231 to 0.219 g/cc) lowered - no changes in smoke deliveries.

3/89

VANTAGE EXCEL 100

Test marketed in Michigan, Arkansas and Louisiana - cigarette paper uses magnesium hydroxide - the blend contains 77% expanded tobacco - advertising claims there is "less lit end smoke" - cigarette delivers 9 mg tar and 0.7 mg nicotine.

1/89

Discontinued

12/89

VANTAGE MENTHOL 100

Introduced - Tar (10 mg) and nicotine (0.8 mg) - filter configuration different from Vantage 100 resulting in higher total and filter RTD.

10/82

Filter length increased (27 to 31 mm) - tobacco weight decreased (0.839 to 0.792 g). Tipping paper length increased (34 to 35 mm). Lower nicotine (0.82 to 0.66 mg) and lower total alkaloid (1.95 to 1.78%) content observed. Ventilation system changed from mechanical to Mauni laser perforation.

9/84

Package with multicolored stripes replaced "bull's-eye" package.

11/86

Filter changed to a tow-in-tow filter - higher smoke deliveries correlated with this change - higher smoke menthol delivery correlated with increased filler menthol.

3/87

Tobacco weight (0.802 to 0.754 g) and rod density (0.237 to 0.224 g/cc) decreased.

7/89

VANTAGE ULTRA LIGHTS 85

Test marketed - New cigarette delivers 6 mg tar and 0.7 mg nicotine. 25 mm CA filter and 324 filter ventilation. This new Vantage Ultra Lights 85 cigarette has a higher filler alkaloid content than the regular Vantage 85 cigarettes.

6/79

Filter changed to CA - expanded tobacco (28 to 17%), tobacco weight (0.630 to 0.697 g), filter ventilation (35 to 55%), tar (6.3 to 5.1 mg) and CO (9.4 to 5.5 mg) decreased.

5/81

CO (5.0 to 6.8 mg) increased - change to less porous paper (16 to 26 sec.) - Increased paper component, puff count decreased. Tobacco weight (0.698 to 0.616 g) decreased - amount of expanded tobacco (17 to 20%) increased.

7/82

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VANTAGE ULTRA LIGHTS 85 (cont.)

Filter length increased (25 to 26 mm).	10/82
Test marketed Filtrona-type filter.	5/83
Filter (26 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - Ventilation system changed from mechanical to Hauni laser perforation.	11/83
Package with multicolored stripes replaces "bull's eye" package.	11/86
Tobacco weight (0.610 to 0.592 g) and rod density (0.215 to 0.208 g/cc) decreased.	12/89

VANTAGE ULTRA LIGHTS MENTHOL 85

National distribution - tar (3 mg) - similar to Vantage Ultra Lights 85 already on the market.	7/82
Test marketed Filtrona-type filter.	5/83
Filter (25 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - ventilation system changed from mechanical to Hauni laser.	11/83
Discontinued.	9/86

VANTAGE ULTRA LIGHTS 100

Introduced - Tar (3 mg) and nicotine (0.5 mg) - Low delivery achieved by a filter ventilation of 47% - Blend contains 19% expanded tobacco.	10/79
Paper component in the cigarette paper decreased - higher puff count (8.6 to 9.2).	4/81
Filter changed to CA - expanded tobacco (28 to 17%), tobacco weight (0.791 to 0.836 g), filter ventilation (45 to 58%) increase - tar (3.2 to 5.6 mg) and CO (7.9 to 9.8 mg).	5/81
Tobacco weight (0.847 to 0.751 g) decreased - increased amount of expanded tobacco (17 to 20%). Lower filler rod TPM (29.0 to 26.2 mg) and puff count (10.7 to 9.0 mg) observed. Cigarette length shortened (99.4 to 99.0 mm).	7/82
CO (5.6 to 6.3 mg) increased - change to a less porous paper (17 to 24 sec.) - Increased paper component (0.8 to 1.3%).	8/82

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VANTAGE ULTRA LIGHTS 100 (cont.)

Test marketed Filtrona-type filter. 5/83

CO (6.4 to 5.6 mg) decreased - change to a more porous paper (24 to 16 sec.) with lower level of paper component (1.6 to 0.9%). 1/84

CO (5.7 to 7.2 mg) increased - change to a less porous paper (16 to 26 sec.) - Filter weight (0.20 to 0.22 g), filter length (27 to 31 mm) and tipping paper length (34 to 35 mm) increased - tobacco weight decreased (0.770 to 0.714 g). 5/84

Package with multicolored stripes replaces "bull's eye" package. 11/86

Tobacco weight (0.729 to 0.709 g) and rod density (0.216 to 0.209 g/cc) decreased. 12/89

VANTAGE ULTRA LIGHTS MENTHOL 100

National distribution - Tar (5 mg) similar to Vantage Ultra Lights 100 already on the market. 7/82

Test marketed Filtrona-type filter. 5/83

CO (6.9 to 6.0 mg) decreased due to more porous cigarette paper (24 to 16 sec.) with less paper component (1.6 to 0.9%). 11/83

Filter length increased (27 to 31 mm) - tobacco weight decreased (0.727 to 0.665 g). Tipping paper length increased (34 to 35 mm) - larger fiber denier (2.5 to 3.0) correlated with higher filter RTD (135 to 155 mm H2O). 9/84

Blend change noted - changes in total alkaloids, total reducing sugars, filler rod TPM, reconstituted tobacco, and expanded tobacco resulted - correlated with higher tobacco weight and rod density - less porous cigarette paper with an increased level of paper component and a higher puff count were observed - no changes in smoke deliveries. 9/86

Discontinued. 9/86

WINCHESTER 85

Plain - Introduced - Tar (18 mg) and nicotine (1.3 mg). No unusual characteristics. 10/74

Discontinued.

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2031438530

WINCHESTER MENTHOL 85

Menthol - Introduced - Tar (18 mg) and nicotine (1.3 mg) -  
No unusual characteristics.

10/74

Discontinued.

WINSTON 80 (BOX)

Nicotine delivery and filler alkaloids decreased.

9/60

Nicotine delivery and total alkaloids decreased.  
Reducing sugars increased.

6/61

Lighter filter of same efficiency.

11/61

Alkaloids reduced by 0.2%.

12/62

Total alkaloids reduced.

5/63

Nicotine delivery and filler alkaloids increased.

2/63

Tar (2 mg) and nicotine (0.1 mg) decreased by addition of  
expanded tobacco (8%) - Tobacco weight lower.

3/70

The amount of expanded tobacco increased (8 to 10%).  
A lower tobacco weight and rod density were observed.

2/71

Filter length (17 to 19 mm) and tipping paper length  
(21 to 23 mm) increased - Tar (1 mg) and nicotine  
(0.1 mg) decreased.

3/73

Lower filler alkaloids (0.1%).

11/75

Tipping paper length increased (23 to 24 mm). Decrease  
in tar delivery (19 to 18 mg).

10/76

Tar (18 to 16 mg) and nicotine (1.3 to 1.1 mg) decreased  
by a change to a more porous paper and a more efficient  
filter.

1/80

New package graphics.

11/88

Tobacco weight (0.736 to 0.698 g) and rod density (0.249  
to 0.236 g/cc) decreased.

7/89

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WINSTON 85

Nicotine delivery and filler alkaloids decreased.	9/60
Lighter filter of same efficiency.	11/61
TPM and nicotine reduction (1.5 mg and 0.2 mg) - Total alkaloids reduced.	4/63
Nicotine delivery and filler alkaloids increased.	2/65
Filter length increased, 17 to 20 mm - No change in smoke deliveries.	8/66
Expanded tobacco (6%) noted in blend of some cigarettes.	11/69
Tar (1.5 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (7%). Tobacco weight lower.	3/70
The amount of expanded tobacco increased (7 to 10%). A lower tobacco weight was noted.	3/71
Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. These changes increased filter efficiency and tar delivery decreased 1 mg.	12/72
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (84.7 to 84.0 mm) decreased.	2/76
Tar (19 to 16 mg) and nicotine (1.4 to 1.0 mg) decreased as result of a change to a more porous paper and a more efficient filter.	2/80
Tar (14.8 to 14.0 mg) - filter ventilation by band of E.S.P. holes.	5/81
Test marketed pack containing 12 cigarettes per pack.	3/83
Tar (14.5 to 16.0 mg) and nicotine (1.1 to 1.2 mg) increased due to increased filler rod TPM (30.2 to 33.4), fiber denier (2.6/Y to 3.6/Y) and decreased paper component (1.6 to 0.4%).	7/83
New package graphics.	11/88
Tobacco weight lowered (0.751 to 0.714 g) - this resulted in lower total RTD (128 to 118 mm of H <sub>2</sub> O), puff count (8.7 to 8.1) and ventilation level (9 to 6%). Higher total alkaloid level (1.9 to 2.0%) was observed - no changes were noted in smoke deliveries.	1/89

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WINSTON LIGHTS 80 (BOX)

Nationally introduced - blend contains two different types of reconstituted material - delivers 10 mg tar and 0.6 mg nicotine. 11/85  
New package graphics. 11/88  
Tobacco weight (0.682 to 0.657 g) and rod density (0.229 to 0.221 g/cc) decreased. 7/89

WINSTON LIGHTS 85

Introduced - 14 mg tar and 1.1 mg nicotine - 25 mm filter and ventilated - Blend contains 14% expanded tobacco. 7/74  
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75  
Tar (12 to 10 mg), nicotine (0.9 to 0.8 mg), and CO (13 to 10 mg) deliveries were lowered as result of an increase in filter ventilation (16 to 25%). Filter ventilation increased by increasing number of ventilation holes from one row to two rows of mechanically perforated holes. 12/80  
The tipping paper was changed from white to cork. The word "lights" on the tipping paper was removed and only the name Winston now appears on the cigarette. 12/81  
Tar (9.4 to 8.4 mg) and CO (11.2 to 10.0 mg) decreased - increased ventilation (26 to 36%). Lower tobacco weight (0.736 to 0.715 g) and rod density (0.254 to 0.248 g/cc) observed. 9/82  
Filter length increased (25 to 26 mm). 10/82  
Test marketed pack containing 12 cigarettes per pack. 3/83  
Filter (26 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - rod density increased (0.244 to 0.249 g/cc) - Ventilation system changed from one row laser to one row mechanical perforation. Total and filter RTD increased. 9/83  
Tar (9 to 11 mg), nicotine (0.7 to 0.9 mg) and CO (9 to 11 mg) increased - decreased ventilation (32 to 24%). Less porous paper (17 to 24 sec.) - ventilation changed from mechanical to electrostatic perforation. 1/84  
Test marketed in Cleveland, Ohio with white tipping paper. No differences were observed in smoke deliveries. 3/88

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WINSTON LIGHTS 85 (cont.)

Lower tar (10 to 9 mg), nicotine (0.7 to 0.6 mg) and CO (12 to 11 mg) deliveries resulted from a change to a more porous paper (19 to 15 seconds) - lower total RTD was observed. Ventilation type changed from electrostatic to laser perforation.

7/88

New package graphics.

11/88

Tobacco weight (0.682 to 0.657 g) and rod density (0.229 to 0.221 g/cc) decreased.

7/89

WINSTON ULTRA 85

Test marketed - ultra low tar (3 mg) with a 25 mm CA filter and 60% filter ventilation - blend contains 25% expanded tobacco.

10/80

Tar (3.4 to 4.6 mg), nicotine (0.39 to 0.46 mg), and CO (4.0 to 5.5 mg) increased - lower filter ventilation (59 to 55%) - lower filter RTD (4.5 to 3.8), tobacco weight (0.645 to 0.609 mg) and rod density (0.222 to 0.209 g/cc) - increase in expanded tobacco (23 to 34%).

2/81

Name changed to Winston Ultra Lights 85.

12/81

WINSTON ULTRA LIGHTS 85

Name changed from Winston Ultra 85. The tipping paper was changed from white to cork.

12/81

Tar (4.9 to 5.4 mg) and CO (4.4 to 6.3 mg) increased. A higher total and filter RTD were observed. Ventilation system changed from 2 to 1 row of mechanical perforation, lower ventilation noted (51 to 44%).

5/82

Tobacco weight (0.594 to 0.638 g) and rod density (0.206 to 0.220 g/cc) increased - decreased amount of expanded tobacco (30 to 20%).

8/82

Filter length increased (25 to 26 mm) - CO delivery increased (6.0 to 7.6 mg) due to change to less porous paper (17 to 23 sec.) - paper component increased (0.8 to 1.6%).

3/83

Filter length (26 to 27 mm) increased rod density decreased (0.216 to 0.211 g/cc).

9/83

Tipping paper length decreased (32 to 31 mm).

1/84

New package graphics.

11/88

Tobacco weight (0.601 to 0.573 g) and rod density (0.212 to 0.203 g/cc) decreased.

12/89

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WINSTON 100

Test marketed - 100 mm long - 20 mm CA filter.	1/67
Tar (6 mg) and nicotine (0.3 mg) reduced by increase in filter length (20 to 25 mm) and tipping paper (24 to 30 mm).	12/67
Tar (1 mg) and nicotine (0.1 mg) increased by a blend change.	4/68
Expanded tobacco (6%) noted in blend of some cigarettes.	12/69
Tar (1 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (7%) - Tobacco weight lower.	3/70
The amount of expanded tobacco increased (7 to 11%). A lower tobacco weight and rod density were noted.	3/71
Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased. Lower tar (1 mg) and nicotine (0.1 mg) observed.	9/73
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (99.4 to 99.0 mm) decreased.	2/76
Cigarette length increased corresponding to 0.4 mm increase in filter length.	11/77
Pack color changed from gold to red.	1/82
Tar (14.1 to 16.4 mg), nicotine (1.02 to 1.25 mg) and CO (15.8 to 16.6 mg) increased - change to a less porous paper (17 to 25 sec.). Increased paper component (0.8 to 1.2%).	9/82
Test marketed pack containing 12 cigarettes per pack.	3/83
Tipping paper length increased (31 to 32 mm) - no changes in smoke deliveries.	7/84
Tar increased (16.0 to 17.4 mg) - ventilation decreased (17 to 10%) - lower nicotine (1.22 to 1.13 mg) and alkaloids (1.94 to 1.57%) - lower paper component (1.4 to 0.4%).	3/85
New package graphics.	11/88
Tobacco weight (0.879 to 0.781 g) and rod density (0.238 to 0.232 g/cc) decreased.	7/89

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2031438535

WINSTON LIGHTS 100

Introduced - 14 mg tar and 1.1 mg nicotine - High efficiency 27 mm CA filter with 15% ventilation - cork tipping paper. 3/77

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Lower tar (13 to 12 mg) correlating with a more efficient filter. 5/79

Test marketed pack containing 12 cigarettes per pack. 3/83

Tar (12.1 to 11.1 mg) and nicotine (0.94 to 0.86 mg) decreased - increase in filter length (27 to 31 mm), filter weight (0.16 to 0.19 mg), and tipping paper length (34 to 35 mm). 5/84

Lower CO delivery (15 to 12 mg) correlated with increased ventilation (17 to 30%) and decreased efficiency (61 to 56%) - lower total RTD and filter RTD were noted. 5/85

Test marketed in San Francisco - has a 24 mm circumference and a 98 mm cigarette length - delivers 10 mg tar and 0.7 mg nicotine. 9/86

National distribution. 10/86

Test marketed in Cleveland, Ohio with white tipping paper. No differences were observed in smoke deliveries. 3/88

New package graphics. 11/88

Tobacco weight (0.807 to 0.781 g) and rod density (0.238 to 0.232 g/cc) lowered - no changes were noted in smoke deliveries. 3/89

WINSTON ULTRA 100

Test marketed - ultra low delivery (4 mg) - 28 mm CA filter with 52% filter ventilation - blend contains 25% expanded tobacco. 10/80

Name changed to Winston Ultra Lights 100. 12/81

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WINSTON ULTRA LIGHTS 100

Name changed from Winston Ultra 100. The tipping paper was changed from white to cork. 12/81

Expanded tobacco amount decreased (29 to 21%) - increased filter weight (0.18 to 0.20 g) resulted in increased filter RTD (124 to 140 mm H2O). 9/82

Filter length (27 to 31 mm), filter weight (0.20 to 0.22 g) and tipping paper length increased (34 to 35 mm) - tobacco weight decreased (0.770 to 0.723 g). 5/84

New package graphics. 11/88

Tobacco weight (0.724 to 0.698 g) and rod density (0.214 to 0.207 g/cc) decreased. 12/89

WINSTON MENTHOL 100

Test marketed - 100 mm long - 20 mm CA filter. 1/67

Tar (4 mg) and nicotine (0.2 mg) reduced by increase in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 12/67

Tar (2 mg) decreased by addition of expanded tobacco (6%) - Tobacco weight lower. 10/70

Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased - No change in smoke deliveries. 1/73

New silver package - High menthol in smoke, filler, and filter. 8/74

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Discontinued.

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